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COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN--
DATA PROCESSING USER'S MANUAL

by

Anita L. McHugh

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ABSTRACT

The following manual is a guide to the general user of programs developed for the analysis of cost and volume data collected in a survey of technical processing and interlibrary loan, within the seventeen western states and British Columbia. Programs and analysis were developed in conjunction with ten data collection instruments, and are specifically intended for use with these instruments. The programs which are documented in this manual are written in standard ANS Fortran, with the single exception of a Tab output format employed in the generation of tables. This system was developed in an IBM remote job entry environment employing an IBM 360/195. The manual details data preparation, call statements from the main program to subroutines, input/output formats, and the generated tables. Program listings for indepth cost analysis employed in twelve case studies are included. Due to the length of subroutines (3000 statements) used in the general survey of costs in 76 libraries these programs are not included in this report. Information on the availability of these programs may be obtained from WICHE publications unit.

COSTS IN TECHNICAL PROCESSING
AND INTERLIBRARY LOAN--
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COST AND FUNDING STUDIES OF THE PROPOSED

WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

Eleanor Montague, Program Director
Maryann Kevin Brown, Senior Staff Associate
Anita McHugh, Staff Assistant
Mary Haenselman, Secretary

Western Interstate Commission for
 Higher Education
P.O. Drawer P
Boulder, Colorado 80302

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
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COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN--
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INTRODUCTION

1.1 Cost and Funding Studies of the Proposed Western Interstate Biblio-
     graphic Network

        The Western Interstate Library Coordinating Organization (WILCO)
of the Western Interstate Commission for Higher Education (WICHE) conducted
cost and funding studies supportive of the related investigations into
the development and implementation of western interstate bibliographic
network capabilities. These studies were funded through the U.S.
Office of Education under Grant No. GOO 7500741 and were additionally
supported by the ten member states of WILCO. As a part of these
studies, three separate examinations were conducted into the costs of
technical processing and interlibrary loan, and the interlibrary loan
traffic throughout the west. These studies are:

        a. Survey of Costs in Technical Processing and Interlibrary Loan.
        b. Case Studies of Costs in Technical Processing and Interlibrary
            Loan.
        c. Survey of Interlibrary Loan Traffic in the Western States.

Studies were conducted concurrently in seventy-six libraries in seventeen
western states and British Columbia. Academic, public and state libraries
were represented. The purposes of these studies were to determine representa-
tive costs of library services in areas of potential network support,
and to determine the current patterns of interlibrary loan traffic
throughout the West. In addition, the cost and funding studies explored
the potential impact of network services upon library costs, and the
economic issues and implications of networking. The reader is directed
to the list of publications in Appendix A for a complete account of
the available documentation on these surveys and other products of the
cost and funding studies.

        This User's Manual represents the documentation of programs and
use of the system of programs designed by WILCO for the analysis of
data collected in the two surveys and the case studies.

1.2 Purposes of the Manual

        The User's Manual is designed to assist the general public in
using the programs developed for analysis of data collected in both
surveys and the case studies. These programs were developed to manipulate
data from questionnaires designed for the survey of costs and activity
sheets used in a three-week data collection in twelve libraries -- public,
academic and state. Because of the nature of surveys, it is believed
that the programs and related questionnaires will be of selective
research use. However, the case study data collection in three major areas
of technical services -- acquisitons, cataloging, and serials -- and
in interlibrary loan can be of great assistance to the library community

in assessing local costs and staffing patterns within department of a single library or for comparative studies in several libraries. For this reason, the thrust of this manual is upon the analysis of cost data within case studies. However, we have also made available to the reader specifications for call statements and use of survey programs. Due to the length of the survey subprograms (3000 statements), this program listing does not appear in the User's Manual. However, these programs will be made available upon request. For details regarding the procurement of these series of subprograms, the reader is directed to the availability statement in Appendix A.

The programs used in the analysis of the Interlibrary Loan Survey are available through the OSIRIS III (an integrated collection of computer programs for the management and analysis of social science data) of the University of Michigan. Because these programs are copyrighted, we are not able to document them in this manual. An explanation of use, description of tables, and data preparation are given here, only.

1.3 The Development of the System

This system was developed in FORTRAN IV in an IBM RJE (remote job entry) environment connected to an IBM 360/195. All input is the standard 37 character set (26 letters of the alphabet, ten numerical digits, and the decimal point). With a single format exception, the programs are written in ANS (American National Standard) FORTRAN. Output tables are based on the availability of 132 characters per line, and many of the tables use all 132 characters. Unless this line length is available, the user will find that many of the output tables will overflow and, thus, not produce results. The one format exception mentioned earlier is the use of the T (Tab) output format used to align table print outs. This is used to tab the carriage (as with a typewriter) to the desired column in which printing a line should begin. Most systems allow for the T format, and this format should not disturb the use of the programs. The user should note that each computer system has a unique JCL (job control language) and must make adaptations appropriate to the local system. In addition, the system of programs is unique to the IBM RJE environment, and must be adapted to the user's environment, as necessary. These adjustments and limitations should be discussed with a qualified programmer familiar with the computer system which the user intends to employ.

1.4 Limits of the System

The accuracy of the data and the use of the final results are at the discretion of the user. WILCO/WICHE cannot guarantee this product beyond its accuracy at the time this manual was published, and for the data on which it was initially used. The reader is reminded that these programs were developed in an IBM RJE environment, and that all JCL included in the programs are unique to the particular IBM 360/195 employed by this project.

1.5 Instruments Used in this Survey

This guide is based upon the use of ten instruments, used by WILCO during the course of these studies. They are:

FOR THE SURVEY OF COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN

Form No. 2: Survey of Costs in Technical Processing and Interlibrary Loan. This form is designed to gather gross costing data within acquisitions, cataloging, serials, materials finishing and interlibrary loan. In addition, certain aspects of staffing patterns, processing support, and interlibrary loan patterns are examined.

FOR CASE STUDIES IN COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN:

Form No. 3: In-Depth Case Study of Costs in Technical Processing and Interlibrary Loan. This form is an expansion of Form No. 2, above, which captures additional costing components such as facility and administrative overhead, as well as costing information necessary for the three-week data collection in technical processing and interlibrary loan to be performed during the study.

Form No. 4: Acquisitions Activity Sheet. This form is a log sheet to be maintained by each staff member performing acquisitions tasks. Kept on a daily basis, this form monitors the time spent and volume processed in 34 activities.

Form No. 5: Cataloging Activity Sheet. This is a log sheet to be kept by each staff member associated with cataloging. Maintained on a daily basis, this form monitors 22 specific activities.

Form No. 6: Serials Activity Sheet. This form is also a log sheet maintained by staff members associated with serials processing. Maintained on a daily basis, 18 specific tasks are monitored for staff time and volume processed.

Form No. 7: Interlibrary Loan Activity Sheet. This log sheet is to be kept by staff members associated with interlibrary loan. This form monitors 25 specific activities in borrowing and lending functions of ILL.

FOR THE SURVEY OF INTERLIBRARY LOAN TRAFFIC:

Form No. 8: Interlibrary Loan Borrowing Transaction Form. This is a single-page tracking document to monitor lag time, type of request, queried institution, and disposition of the request for a sample of transactions received by patrons for materials owned by another library.

Form No. 9: Interlibrary Loan Lending Transaction Form. A
one-page tracking document, this monitors lag time, type of
request, requesting institution, and disposition of request for
a sample of transactions received from another library for materi-
als believed to be owned by the case study library.

The user should have these instruments at hand while examining
this manual. It is imperative that the format of the questionnaires be
maintained for appropriate use of the programs. Certain flexibility for
local modification exists in the design of the activity sheets which is
detailed in following sections.

GUIDELINES TO THE USE OF THIS MANUAL

2.1   The Structure of the Manual

The manual is separated into four sections:

● General data preparation: A general guide to the user on
  formatting, and keypunching instructions.

● The Case Studies of Technical Processing and Interlibrary Loan:
  A guide to the manipulation of data from the Form #3, In-Depth
  Case Study in Costs in Technical Processing and Interlibrary
  Loan for use in specific analysis of the Activity Sheets
  (Forms #4 through #7), data preparation instructions, and
  the call statements in the main program necessary for
  the use of the FACT subroutine, with a description of the
  tables generated.

● The Survey of Costs in Technical Processing and Interlibrary
  Loan: An instructional guide on specific data preparation
  instructions for the background instruments (Forms #2 and #3),
  subroutine calling specifications, and a description of the
  tables generated.

● The Interlibrary Loan Survey: A brief description of the survey
  instruments, Forms #8 and #9, which were used to monitor both
  borrowing and lending transactions during a three-week period
  in 64 libraries, and a discussion of the OSIRIS packages
  employed and output tables generated.

The serious user should study the general data preparation
instructions before using the appropriate sections of this guide relevant
to his/her study.

2.2 Case Study Analysis -- the Use of Activity Sheets

The activity sheets, Forms #4 through #7, are designed
for the individual cost analysis of a single library. The purpose of the
form is to discern:

● Staffing characteristics of individual tasks, and functional
  areas (i.e., cataloging, serials, acquisitions, and interlibrary
  loan).

● Total direct costs and unit direct labor costs by task.

● Percentages of tasks and task costs by staff type (i.e.,
  professional librarian, other professional, clerical, library
  assistants, students, other, and staff paid by other than the
  library).

● Allocation of departmental overhead across tasks, according to
  staff time.

The forms themselves may be expanded or redesigned to meet the special needs of the local library, or group of libraries under consideration. The only limits set upon such adjustment is that the expansion of any single form should not extend past fifty distinct activities. Additionally, the analyst should maintain rigorous control over the activities and conformity to the definition of activities, and the units of count employed by participating staff members. Output tables for any single functional area consist of:

Table I: Time Profile: A table indicating the number of minutes spent on each task by category of employee, the total time spent in the task by type of employee, and the percent of the total employee-type time spent in this task.

Table II: Task Time Profile: A table indicating the total task time spent by all categories of employees, the percentage of that total task time by category of employee, the volume reported (if applicable) and the resulting unit time.

Table III: Cost Profile: A table indicating the direct salary (salaries plus fringe benefits) costs by task and employee group, the total direct salary cost, the administrative task cost (which represents the administration department budget disbursed over the total library full-time equivalencies reported), the volume reported, and the resulting direct labor unit cost, administrative overhead unit cost and the total labor cost (direct labor plus administrative overhead).

Table IV: Profile of Total Task Cost: A table indicating the direct labor task cost, the administrative department overhead, the unassigned, administrative, or supervisory cost overhead, as observed during data collection, and the resulting total labor costs (including prorated cost of nonprocessing related costs and administration), and a percentage of total costs created by the supervisory or unassignable overhead and by staff category.

Obviously, then, the analysis can be expanded to other functional areas beyond technical services or interlibrary loan. The flexibility inherent in the forms and the output tables allow the user freedom in directing the analysis into other areas of library service, or in refining the activities presently employed on the forms. Application of these forms can be made upon the following types of problems within the library:

- Analysis of task costs and staff time spent in either a few tasks or an entire library.

- Examination of tasks expected to change with the introduction of new services, as comparative data for similar examination after the introduction of a new service.

- Analysis of staffing in areas of library service.

The adaptation to local situations allows the analyst to use the programs to assess local costs, staffing, etc. in any area and to any degree needed to meet the local situation. During the studies of individual libraries for this project, a three-week interval was selected for examination. The length of time is, of course, a local option. In situations where the throughput or staffing requirements fluctuate greatly over a period of time, it is recommended that data collection extend either over a longer period of time, or during several intervals at different times throughout the year, or at intervals over wide ranges of time (e.g. several days a week over a two-month period). Similarly, if throughput and staffing are stable, the need to collect data over a three-week period is diminished. However, the analyst should be aware that it is often helpful to those collecting data to have a training period for trial of the forms. This enables staff members to adjust to the definitions of tasks and methods of data collection.

The reader is directed to Section 4 for a full account of the programs used in the case studies of costs in technical services and interlibrary loan.

2.3 Survey of Costs -- Use and Analysis

As mentioned earlier, the survey format described in section 5, Analysis of Survey Data, may not be of general use to the user unless a similar survey is conducted. The purposes of the survey were to detect average expenditures and ranges across several functions and across a broad range of libraries. The survey is based upon a random sample stratified into type and size of libraries. Our survey employed the following strata:

Academic Libraries

Large (over 960,000 volumes in holdings)
Other (less than 960,000 volumes in holdings)

Public Libraries

> Large (over 820,000 volumes)
> Regional (less than 820,000 volumes and serving a group
>   of independent libraries within two or more counties)
> Other (less than 820,000 volumes)

State Libraries

These six strata comprise the groupings into which survey results were presented. Programs used in analysis of the survey data were designed to handle thirty libraries in each stratum, for a total of 180 libraries. The user of the survey programs may find the strata designations inappropriate to the needs of data analysis he/she wishes to perform. However, these designations may be useful as a segregation of data, or for instance, where survey participants exceed thirty libraries (the maximum limit of libraries which can be handled in analysis of a single stratum). Also, the reader should be aware that headings employed in the tables reflect the classification of strata used in this survey. (i.e., Large Academic Libraries, Other Academic Libraries, Large Public Libraries, etc.). Format and print statements would necessarily have to be adjusted by the user if strata titles were inappropriate for his/her needs. The reader is advised that these strata definitions are also used to encode certain data from the questionnaire. In encoding data for the interlibrary loan section of both questionnaires, Form #2 and Form #3, major lender and borrower information (the final page of the questionnaire) was encoded to reflect whether these libraries were large academic, other academic, large public, regionals, other publics or state libraries. These designations conform to the definitions used for the strata.

A description of the tables and sample tables appear in appendix E. There are 32 tables generated from the cost survey program. As mentioned earlier, the subprograms represent about 3000 statements. For this reason, only call statements, data preparation and output tables can be included here. Appendix A includes an availability statement of the full program including subroutines.

2.4 Interlibrary Loan Survey

The purpose of the interlibrary loan survey was to determine the traffic and characteristics of borrowing and lending transactions throughout the western states. The use of the OSIRIS programs allowed for univariate and bivariate analysis of the data. The programs are especially useful in discerning the types of materials most often requested and lent. For the individual library, it can be a valuable

tool in monitoring the usefulness of a bibliographic center, in monitoring lag times through certain lending institutions, and as a guide to possible areas of collection development. For several libraries, it can assist in the assessment of regional interlibrary loan services and networking, as well as monitoring the level of self-sufficiency within the region. The interlibrary loan forms are a part of the public domain, and can be used by any individual interested in studying interlibrary loan traffic. The programs used, however, are copyrighted by the University of Michigan and we are not privileged to make these available to the reader. However, both the OSIRIS programs which we used in our analysis and the canned packages of others, such as SPSS, are available through a variety of sources which the reader may wish to investigate.

Our survey of interlibrary loan was based upon equal interval sampling dependent upon the expected interlibrary loan volume. During a three-week period borrowing or lending requests were tagged for inclusion in the sample at intervals of one, three, five, ten or twenty (depending upon the interval established for the participating library). During analysis, these observations (i.e., completed forms) were weighted according to the interval employed (e.g., if every third request were tagged, the weight by which these observations were multiplied was 3).

GENERAL DATA PREPARATION INSTRUCTIONS

3.1 Introduction

All ten forms described in Section 1.5 of this manual have
been coded to allow most data to be punched directly from the form.
This eliminates the need for recoding or encoding all data
from the book or sheet to a coding form of some variety. Due to the
complicated nature of the two background instruments (forms #2 and 3),
some coding is necessary, and these necessary adaptations to the form are
explained in following sections of this Manual.

The user should keep in mind that bad data input to any mathematical
computation is compounded during that computation, and thus the user should
endeavor to maintain a reasonable level of accuracy. Appendix D contains
selected samples of correctly punched data from all the ten instruments.

3.2 The Character Set

For all ten forms, the character set includes the following:

*the numbers 0 through 9
*the decimal point   "."
*the alphabetic characters A through Z
*the minus sign, "-"

There are no other characters used; no parentheses, no percent
signs, no dollar signs, no commas. The minus sign is used only as a flag
in two special circumstances, described in 4.3.

3.3 Card and Column Numbers

The user will, in looking over the data collection instruments, have
noticed that there are numbers in parentheses, such as (Cl) and (C57) and
(38), (14, 15) and (21 -30) appearing in the right margin of the background
forms and under page/column headings in both the background forms and the
activity sheets. These numbers are generally smaller in size than the
characters in the body of the form. Numbers preceeded by "C", and enclosed
in parentheses, are found only in the two background forms; these refer
to the card number, and range from 1 to 77. The numerical entries in
parentheses, e.g., (14,15), are found on all forms and are used to denote
the column numbers of an 80 column punched card in which these data are
to be punched. These numbers, between 11 and 80, may be for a single
column, e.g. (36), or (16,17), to indicate two columns, or (31-40) to indicate
all columns between, and including, 31 and 40. These column numbers are
normally marked (or printed) on the face of computer punch cards. Again,
the user is reminded that there are some adjustments to the background
instruments (Forms #2 and 3) that must be made before the instrument is

ready to be keypunched. Where adjustments are necessary, these changes will be noted in the following sections of this manual. For specific instructions concerning the activity sheets, see Section 4; for the cost survey, see Section 5; and, for the interlibrary loan survey, see Section 6.

3.4 Placement of Numeric Data

All numeric data are to be right justified in the field specified for it. That is, if the field length is 5, e.g., (15-19), the number 134 must be entered as ƀƀ134 where ƀ indicates a blank. In this case, the number entered as ƀ134ƀ would be read by the computer as 1340. In general, the right most digit must be in the right most columns of the allocated field (i.e., column designated for the entry).

3.5 Special Questions

There are two types of questions that do not require numeric data within the questionnaire, but must be encoded (assigned a numerical coding) for input requirements: (1) those that are to be answered with a yes or a no and (2) those where the user/librarian is required to check statements which are true or describe his/her situation. For those that require a yes/no answer (e.q., "Do you like your hot fudge sundaes with a cherry on top? yes___, no___"), the response is coded and then punched as follows:

Code	Response
1	yes or positive response
2	no or negative response
3	sometimes, maybe, only on Sundays, i.e., a qualified response
0	blank or no response at all

The following example illustrates the coding the second type of question, i.e. those that require checking a true statement:

Please indicate below those qualities that apply to you.

```
    I am charming         ( )
    I am witty            ( )
    I am beautiful        ( )
    I am handsome         ( )
    All of the above      ( )
```

The user should code these responses as follows:

1	for those items checked
0	for those items left blank.

3.6 Reserved Columns

On all ten forms, the first ten columns of input punched cards
are reserved for either data, card, form, or page identification. Some
columns are for the user who might wish to review (or verify) the data;
other information in these columns is necessary for the computer to
search and verify that the system has the correct card of data for
processing; and, of course, some information is explanatory of
identification for both the user and the system.

The identification columns common to all forms and all cards are
as follows:

Col #	Explanation
1	Form # (2,3,4,5,6,7,8,9)
2-6	used differently for different forms (refer to section 4 for activity sheets, section 5 for cost survey, and section 6 for the interlibrary loan survey)
7,8,9	library number (this cannot be zero) as described below
10	unique for different types of forms (refer to specific sections following)

The library number, placed in reserved columns 7-9, cannot be
zero. The user may use a "dummy" number, or employ the number to
indicate stratification and identification when analyzing data from
several libraries. For our use of the library number as identification,
the reader is directed to section 5.

ANALYSIS OF THE ACTIVITY SHEETS: THE FACT SUBROUTINE

4.1 Introduction

      This section describes the generation of the time and cost
profiles (activity sheet   summaries, Tables I through IV) exhibited
in Appendix F. The information required for these analyses is derived
from staff lists (pages 7 through 12) of the case study background
instrument and the set of activity sheets (form numbers 4, 5, 6, and 7).
In addition, the generation of employee hourly cost lists is discussed.
Sample hourly cost lists cannot be reproduced in this report due to
the confidential nature of the information.

      The subroutine used to produce time and cost profile tables is
called FACT. It has been designed as an all purpose unit capable of
analyzing any set of not more than 50 unique tasks, performed by a
set of not more than 50 distinct staff members. Although, for the
purposes of this study, the subroutine was employed to analyze data
gathered in acquisitions, cataloging, serials, and interlibrary loan,
the subroutine can also be used for analysis of reference, circulation,
or any functional area within the library, within the limits stated
above.

      In addition, one task can be allocated for administrative tasks,
breaks, lost time, peer consultation, and so forth. We employed this
task designation in all areas, for example,task number 31 on the
acquisitions activity sheet (form #4). If the user is designing his/her
own activity list, it may be beneficial to include such a task. The
system will distribute the total cost of this task to all other tasks
under consideration in the Summary Table IV. This is optional, and
may be omitted with no adverse effect on the running of the subroutine.
The subroutine FACT is listed in Appendix H . The following subsections
are intended to instruct the user in the preparation of input, the
requirements of the main program and call statements, and the specifica-
tions of the deck set-up.

4.2 Data Required for the Subroutine FACT

      There are three groups of input data required for the use of the
FACT subroutine. They are (in order of input):

- the paid days off, fringe benefits, and sabbaticals (pages
  11 and 12 of form #3)
- the staff list (not to exceed 50 employees for any functional
  area, e.g., cataloging), formatted as Form #3 page 10 if the
  user is using his/her own list of tasks and staff; otherwise
  from pages 7-10 of form #3.
- the set of activity sheet tasks (not more than 50 separate
  tasks) including a header/description card for the set of
  activity sheets.

All data are punched on 80 column cards and read into the subroutine from those cards. As explained in Section 3, the general data preparation instructions, the first 10 columns are reserved for identification for both the user and the computer system. As a reminder, column 1 is for the form #, columns 7, 8 and 9 are for the library number which will be printed on all output and must not be zero. All data placed in numeric fields must be right justified.

4.3 Calculation of Fringe Benefits.

Fringe benefits are considered to be any benefit which a library employee receives from the library or parent organization for which he or she does not pay. These benefits include vacation, sick leave, and sabbaticals.

This information has been requested on pages 11 and 12 of form #3, the background information for the case study libraries The following section explains how this information must be prepared for input to the FACT subroutine. See Table 4-1.

Table 4-1.   Preparation of Card Numbers 1-4:   Paid Days-Off and Fringe
Benefits.

Col #	Explanation
1	form # (in this case 3)
2,3	page number from which the information is punched (in this case, 11)
4,5	blank
6	card number (1, 2, 3 or 4)
7, 8, 9	library number
10	blank
11-15	information pertaining to professional librarians, classification a
16-20	information pertaining to other professionals, classification b
21-25	information pertaining to library assistants, classification c
26-30	information pertaining to library clerks, classification d
31-35	information pertaining to student assistants or pages, classification e
36-40	information pertaining to other types of library employee, classification f
41-45	information pertaining to staff members paid by out-of-library sources, classification g

        Fringe benefit data is punched on cards numbered 1 to 5 in the
following order:

        Card #1: paid holidays (page 11, lines 8 through 25, item a)
        Card #2: paid sick leave (page 11, lines 8 through 25, item b)
        Card #3: paid vacation (page 11, lines 8 through 25, item c)
        Card #4: fringe benefit rates which are calculated as the
                  percentage of the employee's salary or wages to cover
                  insurance, retirement, etc. (page 11, lines 1 through 7,
                  item c, the total column)
        Card #5: sabbatical (page 12, items 26 through 29)

        These cards are essential. If this information is not available
for cards #1 through #4, these cards may be left blank, and the system
will assume zeros for all necessary information. For the benefit of the
user, it is recommended that the card number be entered on blank cards to
guarantee the correct order of input. Card #5, however, requires
additional information as explained in Table 4.3, Example 5 below, and
cannot be left blank. All these cards, even if blank, must be included
in the input deck to maintain the necessary data stream. The following
are examples to demonstrate the manner in which the necessary information
is punched.

Example 1. Card #1, Paid Holidays (from page 11, form #3).

        If paid holidays (e.g., Christmas, Thanksgiving, etc.) total
eleven days for all employees, Card #1 would look like the following example
for library number 900.

311ØØ1900ØØØØ11ØØØ11ØØØ11ØØØ11ØØØØ0ØØØ11ØØØ11 (the remaining columns
                                             are blank)

Example 2. Card #2, Sick Leave (page 11, Form #3).

        For example, all paid employees, except student assistants, receive
ten paid days of sick leave annually. This card would appear as follows
for library 900.

311ØØ2900ØØØØ10ØØØ10ØØØ10ØØØ10ØØØØ0ØØØ10ØØØ10 (the remaining columns
                                             are blank)

Example 3. Card #3, Paid Vacation (page 11, Form #3).

        In this case, student assistants in library number 900 receive no
paid vacation. Paid vacation for professionals (librarians and others)
is equivalent to 22 days annually. Other employees receive ten days of
vacation annually, during the first ten years of employment by the
library; fifteen days after eleven years of employment and up to twenty
years of employment; and, after twenty years of employment by the library,
employees receive twenty days. Incremental vacation is punched as follows
for this case:

311ØØ3900ØØØØ22ØØØ22ØØØ-5ØØØ-5ØØØØ0ØØØ-5ØØØ-5 (the remaining columns
are blank)

311ØØØ900ØØØØ10ØØØ10ØØØ20ØØØ15ØØØ25ØØØ20   (the remaining columns
are blank)

The "-5" in fields allocated for the library assistant (columns 14-15),
clerk (columns 19-20), other type of employee (columns 29-30), and staff
paid by outside sources information (columns 24-25) are flags to the
program to prepare for additional cards on incremental vacation for these
types of employee. For each flag indicated on card #3, there would be an
additional card of the second type immediately following card #3 indicating
the days of annual vacation granted and the upper limit of years employed
for which this amount of vacation is given. Cards of the second type
must be punched to include three increments. That is, if only two
increments are granted over employment, the second increment should be
repeated in columns 31 through 40. Nor does the system allow for more
than three increments. There must be one card of this second type for
each employee classification for which the -5 flag has been entered in
the first card. These cards must be in order of classification. That
is, the card indicating incremental vacation for library assistants
would precede that for clerks, which would precede the card for other
employees, and so forth. The information on this second card type beyond
the first 10 identification columns is indicated in Table 4-2.
The subroutine also allows for similar increments in sick leave. The
minus flag for incremental sick leave is -3. This would be punched exactly
as indicated in this example for the -5 flag. The format of the second
type of card is the same, and there must be a card of the second type for
each classification field for which the minus flag is entered in card 1.

        The user should be aware of the fact that incremental sick leave
and/or vacation may apply to all, and vary with, classifications of
employee. If the library has no incremental vacation or sick leave plan
(i.e., if all employees receive the same number of days of paid vacation or
sick leave regardless of the number of years employed by the library),
these annual data are punched in the same format as the paid sick leave and
number of paid holidays cards in examples #1 and #2.

Example 4. Card #4, Fringe Benefit Rate (page 11, Form #3).

        In this example, library number 900 provides an average of 13%
of salary for fringe benefits to all employees, except student assistants
who receive 6% of salary in fringe benefits. This would be punched as
follows:

312ØØ4900ØØØØ13ØØØ13ØØØ13ØØØ13ØØØ6ØØØ13ØØØ13 (the remaining columns
are blank)

Table 4-2. Specifications for Cards on Incremental Sick Leave or Vacation.

Col #	Explanation
11-15	upper limit of years employed by library to qualify for the first increment of paid vacation (or sick leave)
16-20	first increment of paid vacation (or sick leave)
21-25	upper limit of years employed by the library to qualify for the second increment of paid vacation (or sick leave)
26-30	second increment of paid vacation (or sick leave)
31-35	final limit on paid vacation (or sick leave) or maximum number of years employed by the library. The system will select the corresponding increment of paid vacation (or sick leave) for all employees employed by the library for more than the upper limit entered into columns 21-25. However, this field must not be zero.
36-40	final increment of paid vacation, that is, the maximum number of days of paid vacation (or sick leave).

The final card of fringe benefit information is on sabbatical plans that the library may have. This is requested on page 13 of the background survey instrument. This card may <u>not</u> be all blank. The following table shows the format of the card on sabbaticals.

Table 4-3. Sabbaticals

Col #	Explanation
1	form # (in this case, 3)
2,3	page number (in this case, 12)
4,5	blank
6	card number <u>5</u>
7, 8, 9	library number
10-14	blank
15	response to question 26. If the response is no, a 2 is punched in this column and the rest of the card is left blank. If the response is yes, a 1 is punched in this column, and the other information must be entered as follows.
16-19	blank
20	response to question 27, the classification of those employees receiving sabbatical benefits
21-25	response to question 29, the length of the paid sabbatical in whole months at full pay
26-30	response to question 28, interval at which a qualified employee becomes eligible for sabbatical in number of whole years.

The following example displays a correctly punched card #5.

Example 5.   Card #5, Sabbatical (From page 12, Form #3).

This example represents library number 900, which allows an eight-month sabbatical to professional librarians every ten years. Card #5 would be punched as follows:

312ᵇᵇ5900ᵇᵇᵇᵇᵇ1ᵇᵇᵇᵇ1ᵇᵇᵇᵇ8ᵇᵇᵇ10 (remaining columns are blank)

Note that the eight months are calculated at full pay in this example, and that, if the library had given eight months at half pay, a 4 for the number of whole months would have been entered in column 25 to represent sabbatical pay.

4.4   Preparing the Staff Lists for the FACT Subroutine

The staff lists are found on pages 7 through 10 of the background data form for the case studies (Form #3). If the user has provided his/her own set of activity sheets, merely use the format of one of these pages for the staff list. As with all other forms and data, the first 10 columns are reserved for identification useful and necessary to both the user and the computer. The column reservations are as follows:

Col #	Explanation
1	Form #, in this case a 3
2,3	page number, either 7, 8, 9, 10
4, 5, 6	blanks
7, 8, 9,	library number, not a zero
10	blank

Note that the columns into which the data are punched are the columns (field) specified at the top of the page under the column headings (e.g., (11-15) for employee ID number, (20) for type of employee, (21-30) for annual salary and so forth). There is one column change; under i, the employee's supervisor's identification may take up to 5 columns (i.e., columns 46-50 instead of only the specified columns 49 and 50). All data on salary should be right justified in the appropriate field. The hourly wage may be punched as a real number (e.g., $2.33 per hour would be punched as b̸2.33 in columns 31-35). All other information is to be punched as right justified integers. Refer to Appendix B for a definition of right justified. The employee classification (professional librarian, other professional, etc.) should be punched as an integer (1-8) corresponding to the Alpha character (A-H) that is used to designate the grouping. That is, 1 represents A, 2 represents B, etc. The employee's identification and that of his/her supervisor may be punched as Alpha characters. Note that while A B and AB and A.B. may mean the same employee, the computer will read these designations as different employees. After the analyst has designated the employee identification, this identification must be used precisely and consistently for the activity sheets and all other references to that employee. Note that for the purposes of employee identification, the same guideline applies equally to numeric identification (e.g., 001 is not the same as b̸b̸1).

Examples of correctly punched cards for staff lists follow:

Example 6.   Salaried employee working in two departments under study.

An employee, library assistant (category c), with an identification designation of A, is employed in Library number 900, earns $9000 annually, and works approximately twenty hours per week in acquisitions, and twenty hours per week in cataloging. This employee would have the following two cards punched, where he/she works a full twelve-month year and his/her supervisor has the identification designator, S.

/307b̸b̸b̸900b̸b̸b̸b̸b̸Ab̸b̸b̸Cb̸b̸b̸b̸9000b̸b̸b̸b̸b̸2040b̸b̸b̸b̸5b̸b̸b̸b̸S

/308b̸b̸b̸900b̸b̸b̸b̸b̸Ab̸b̸b̸Cb̸b̸b̸b̸9000b̸b̸b̸b̸b̸2040b̸b̸b̸b̸5b̸b̸b̸b̸S

Note that if this employee had worked twenty hours in acquisitions, and twenty hours in circulation (i.e. an area not being studied), only the first card would have been punched for input.

Example 7.   Hourly employee working in one department under study.

In this case, a page earning $2.67 per hour at library number 900 has the Id., B, and works full time in interlibrary loan. He or she would have one card punched as follows, where his/her supervisor is #T.

/310b̸b̸b̸900b̸b̸b̸b̸b̸Bb̸b̸b̸b̸Eb̸b̸b̸b̸b̸b̸b̸b̸2.67b̸4040b̸b̸b̸b̸3b̸b̸b̸b̸T

4.5 Preparing the Activity Sheets for the FACT Subroutine.

An activity sheet is basically a list of tasks numbered from
1 to N (where N is a number less than or equal to 50). Each set of
activity task cards (i.e., those cards punched from one set of activity
sheets) must have a header card containing the information on the Table 4.4.
(The * indicates that this is not optional, and must be included, not
blank or zero).

Table 4-4. Description of the Header Card.

Col #	Explanation
1-8	* eight alphanumeric characters to describe the set of activity sheets, e.g., ACQ for acquisitions. This identifier will be printed on the output tables.
12,13	* total number of tasks to be listed (not more than 50)
17,18	the number of the administrative type task, to be distributed over all other tasks (may be omitted)
19-28	the administrative department budget, the cost of which is also distributed over all other tasks according to the task time (may be omitted)
29-34	the total library FTE (used for distributing the administrative department costs equitably over all other departments of the library) This may be omitted.

Example 8.   Header Card.

A set of acquisitions activity sheets could have the following header card.

ACQ฿฿฿฿฿฿฿37฿฿฿31฿฿฿฿฿15000฿22.5   (rest of card blank)

WHERE
ACQ   implies acquisitions and the ACQ will be printed as part of the output header

37   is the maximum number of tasks listed in this case, including those tasks listed under "other" by employees

31   is the administrative task number, the cost of which is to be distributed over the other tasks

15000   is the administrative department budget

22.5   is the total library FTE

The activity sheets themselves are easy to prepare.   The following table shows the columns and the necessary information for columns 1-10. These are the identification numbers, the remainder are data, and are noted on the form.   Cards only need be punched for tasks in which time data has been entered by the employee.

Table 4-5.   Description of Activity Sheet Task Cards

Col #	Explanation
1	form # (either 4, 5, 6, or 7)
2-6	blank
7, 8, 9	library number (must not be zero)
10	blank
11-15	the employee's identification (must be identical to that used in the employee lists, pages 7 through 10)
19,20	the task number (which must be less than or equal to 50). The user need only punch cards for those tasks where there is time entered.
21-25	the time spent on this task in whole minutes
26-30	the volume processed (e.g., number of cards alphabetized or filed). If no data are supplied, these columns may be blanks.

The deck of activity task cards must end with a blank card, to signal the end of the deck. There is no order requirement within the deck itself (that is, task cards do not have to follow in sequence of task number or employee number).

4.6 Using the FACT Subroutine

Once data preparation is complete, two program statements within the calling program must be prepared to specify the library number (LIB), and the number of employees in the staff list (NOEMP). Since this is a FORTRAN program, the user is reminded that all statements within the main program and subroutines must begin in column 7. The two cards are equivalence (i.e.,"equal")statements. For example, library number 900, with 43 employees, would have the following two cards in the calling program:

LIB=900

NOEMP=43

The next card to be prepared is the call to the subroutine FACT. This call statement is:

CALL FACT(LIB,NOEMP)

And then, as with all FORTRAN programs, a final card is necessary to tell the computer that it has completed the job:

END

This is followed by the three sets of data (i.e., fringe benefit cards, staff lists, activity task cards) punched according to the specifications indicated in the previous four subsections. Additionally, the user must prepare and arrange the job cards appropriate to his/her installation, and according to correct keypunch specifications. The results of this program, subroutine and input are an employee hourly cost list and those tables I through IV, exhibited in appendix F.

It is possible to run more than one set of activity task cards at a time. Due to the possible multiple requirements of this situation, there are three other entry points (i.e., three other ways to call) the subroutine FACT.

The entry points and their uses and output are as follows:

FACT   runs the entire subprogram, using all the information on pages
        11 and 12, the staff lists and the activity sheets, producing
        the list of hourly staff cost and the time and cost profiles.

FACT1 uses only the information on pages 11 and 12 and the staff list
        to produce only the hourly cost list.

FACT2 after FACT or FACT1 has been run, uses previous information from
        pages 11 and 12 and a new staff list and a new activity sheet
        deck to produce both the hourly cost list and the time and cost
        profiles.

FACT3 after FACT or FACT1 or FACT2 has been run, uses previous informa-
        tion from pages 11 and 12 , previous staff list, and a new activity
        sheet deck to produce a new set of time and cost profiles.

Example 9. Calling Sequence

        Library number 800 has a total of 45 employees working in combined
acquisitions, cataloging and serial sections, and another 9 in interlibrary
loan. So the calling sequence to produce hourly cost list, and time and
cost profiles from the activity sheets for all departments, and all
employees would be as follows:

        LIB = 800

        NOEMP = 45

        CALL FACT (LIB, NOEMP)   (runs the first set of activity sheets,
                                     i.e., acquisitions)

        CALL FACT3 (LIB,NOEMP)   (these last two run the second and third
                                     set of activity sheets, i.e., cataloging
        CALL FACT3 (LIB,NOEMP)   and serials, using the same list of employees)

        NOEMP = 9

        CALL FACT2 (LIB,NOEMP)   (uses new employee list to run the final
                                     set of activity sheets, i.e., interlibrary
                                     loan)

        END

        For this example, the data deck would be set up in the following
order:

1. cards 1-5 from pages 11 and 12, in order, holidays, sick leave,
    vacation (including one card for each group of employees that
    receives incremental sick leave or vacation as in the punching
    instructions section 4.3), fringe benefits, sabbatical;

2. the employee staff list, including identifications for <u>all</u> the
    employees completing activity sheets in acquisitions, cataloging
    and serials. (The program will stop if it can't match the employee's
    ID from the activity sheets with one in the staff list.);

3. activity sheet identification card for acquisitions (as described
    in Section 4.5, Table 4-3);

4. the deck punched from the activity sheets for the acquisitons
    department (i.e., acquisitions activity sheet deck), as described
    in Table 4-4;

5. a blank card. This is to signal the end of the activity sheets.
    (The program then summarizes and writes the time and cost profiles
    for acquisitions.);

6. activity sheet identifier for cataloging (as described in Table 4-3.);

7. cataloging activity sheet deck (as described in Table 4-4.);

8. blank card;

9. serials activity sheet identifier card (as described in Table 4-3.);

10. serials activity sheet deck (as described in Table 4-4.);

11. blank card;

12. the nine employee cards for the interlibrary loan department (as
    described in section 4.4);

13. interlibrary loan activity sheet identifier (as described in Table 4-3.)

14. interlibrary loan activity sheet deck (as described in Table 4-4.); and

15. blank card.

   Refer to Appendix H for a listing of the FACT subroutine.
   Refer to Appendix G for deck set-up examples for this program.

4.7 Fatal and Non-Fatal Errors

      In producing the sets of tables there are three possible fatal
errors. The first and second are related to incorrect count of the
number of staff list cards. If NOEMP is less than the number of
employee cards, the program will stop with no written message. If
NOEMP is greater than the number of employee cards, the program will
stop in that it has tried to process the activity sheet identifier card

with alpha characters where it expected to see only numerics. The third is the most prevalent and also the most difficult to find, and that is, if the program is unable to match a member of the listed staff with the one that filled out the activity sheet. In this case the program stops with a STOP 55 in the system as a message.

The other error that may be encountered is a blank card or a zero in the activity sheet task time (columns 24,25). This will cause the program to end before the end of the data with no message to that effect.

ANALYSIS OF THE SURVEY DATA

5.1 Introduction

The data analyzed with the system of subroutines described in this
section are derived from the two background instruments:

- Form #2, The Survey of Costs in Technical Processing and
  Interlibrary Loan, and

- Form #3, In-depth Case Studies of Costs in Technical Processing
  and Interlibrary Loan.

The system of subroutines to produce the output summary tables
described and exhibited in Appendix E is accessed or called with a
short Fortran program. There is a single control subroutine for each
set of tables plus a basic statistics subroutine to provide the weighted
mean (average), high and low observations, and the weighted standard
deviation. These tables are generated from an array of not more than
30 data points (i.e., observations for a single table element) and
their respective weights. Due to the complicated format structure
of the instruments themselves, there is a single subroutine to search
the data set (the set of all survey data from every library in the
survey) stored on tape or disk and retrieve the appropriate card image
or images for processing in each of the respective tables. By personal
preference, the main control program and each of the control subroutines
have associated with them a dictionary of words used in column headings
and line labels and   associated subroutines to access these dictionaries.

5.2 The Survey Data Set

The survey data set consists of 80 column card images punched or
prepared from the survey instruments. These cards are numbered 1 through 77.
This data set is written on a tape or disk rather than being used as
card input to allow for multiple searches of the data set. The in-
depth case study instrument (Form #3) is an expansion of the survey instrument
(Form #2) and both Forms #2 and #3 are identically coded for keypunching res-
ponses to survey questions in which the information coincides.

The system assumes that the data present on tape or
disk are correct; that all cases/libraries contain exactly 77 cards;
and that all cards are in numerical order.

5.3 Stratification of Libraries for the Purposes of this Survey

For purposes of this survey, the libraries responding were
divided into groups or strata according to size and type, to avoid
comparing doughnuts to doughnut holes. The libraries were then numbered

according to the group to which they were assigned. The keypunching format allocates 3 digits or columns to the library number, the first of which was used to distinguish the strata of libraries. The other two columns were unique to each library and used to identify a single library.

For example, library number 308 is different from library number 305, although both belong to the same grouping or stratum. There is no internal checking on size and/or type. The digit designating stratum is there to expedite the searching process, as the tables are generated for only one stratum at a time. All other numbers are ignored during the data set search.

The following table is a list of the codes used for stratum identification. This initial digit also indicates to the computer the appropriate heading that will be used in printing the summary tables:

Stratum Identification Number	Library Stratum
	large academic libraries, holding more than 960,000 volumes
1	state libraries
2	large public libraries, holding more than 800,000 volumes
3	other regional libraries, those public libraries holding less than 800,000 volumes and offering at least one type of regional service to libraries in at least two counties
4	other academic libraries, those holding less than 960,000 volumes
5	other public libraries, those public libraries not included in either large public or other regional grouping, and holding more than 3000 volumes.

In addition to specifying to the computer output headings and strata, these codes were used in encoding types of libraries lending and borrowing from participating libraries (see page 24 of Form #2 and page 34 of Form #3) which are summarized and printed in Tables X-G and X-H, frequency of borrowers and lenders tables. The user can change these definitions to fit his/her own situation, keeping in mind the headings generated and that he/she should be consistent throughout the analysis of the survey data.

5.4 Reserved Columns

For identification of the data contained on the card by both the user and the computer, the first 10 columns have been reserved as follows:

Col #	Explanation
1	form # (either a 2 or a 3)
2,3	page number (found in the upper right hand corner of each page, 1 through 26 for Form #2 and 1 through 35 for Form #3)
4,5	card number (1 through 77, noted with a "(C__)" in the right margin.) Only the digits are punched. Do not include "C".
6	blank
7,8,9	library number (with the first column, i.e., column 7, the stratification digit as explained in the previous section)
10	flag digit for the budget pages (that is, 14 and 15 of the survey Form #2, and 22 and 23 of the case study Form #3), or blank for all other cards.

5.5 Alterations to the Coded Keypunching Format

The expanded case study Form #3 is coded for keypunching exactly as the survey instrument Form #2. There are exceptions, however. In two sections the case study information does not correspond exactly with the survey information. Conversion requirements for Form #3 are discussed in Section 5.6.

The user should be aware of a problem arising from the processing of survey data, which may occur. There are three potential responses within the questionnaire which may exceed the allocated field length (e.g., the response is 100 and the field length   allowed for only two digits). In these, as in any other cases of possible overflow, the user should enter a 9 in each of the columns in the allocated field (e.g., where two columns are allowed, enter 99). The system in these cases notes that true data exceeds the field (i.e., large data) and if possible and applicable corrects by adding the 1 (e.g., 99 becomes 100). These three exceptions to data input are noted in the following table. This table documents necessary changes to the coded keypunching format which appears in Forms #2 and #3.

Table 5-1. Alterations to Coded Keypunching Format

| Page Number | | Explanation (question number, line number, |
| Form #2 | Form #3 | and identification changes to be made, or |
		codes to be employed)
1	1	question iii, card 1, columns 29-33 1 for calendar year (columns 30-33 blank). 2 mm nn (29-33) for fiscal year with mm beginning month, nn ending month. For example, fiscal year July 1 to June 30 would be coded 20706.
4	5	estimated title to volume ratio. Data should be placed on (CII). Cols 41-45 estimated titles Cols 46-50 estimated volumes. For example, 2 volumes per title or 1 title per two volumes would be punched as 1 in col 45, and 2 in col 50.
4	5	question I, union catalog or union list. Each positive response (bookstock, periodical, other) is allocated 2 columns. If the item is checked (i.e., a positive response) a 1 should be punched in the first specified column of the field; and in the second column, a 1 if the union catalog is computer produced, or a 2 if not computer produced.
7	13	cards 28 and 29, staff. Circumstances necessitated complete renumbering of the specified columns (fields) for responses on this page. Refer to Exhibit 5-1 for the renumbered edition. These data from Form #3 (page 13) must be transcribed from more than one page. Refer to section 5.6 on the conversion of case study data to the survey instrument format.
8-11	14-17	cards 30 through 44, support services. This was an area of possible extra large data (i.e., data which overflows the specified field). See introductory paragraphs of section 5.5 for general instructions on the use of the 9 fill in these cases. The system does not correct internally for a 99999 entry in these cases.
8-11	14-17	For those items where the function is checked (i.e., support services purchased) but no data on volume or cost is available, the code, -1, in the volume column will indicate a positive response (i.e., checked function).

Page Number		
Form #2	Form #3	Explanation

11	17	question G, card 44, columns 37-44, support systems. Codes employed are: For in-house development, a 1 should be punched in the appropriate column; for contracted development, a 2 should be punched in the appropriate column.
12	18	question H, computer systems. The single column indicated after "System name " is a single digit to indicate the system function (i.e., the area of support). The codes employed are:

        1 Circulation
        2 Acquisitions
        3 Interlibrary Loan
        4 Serials
        5 Inventory Control
        6 Cataloging
        7 Processing
        8 Accounting
        9 Other

12	18	question L, system maintenance. If more than one organization is responsible for system maintenance, use additional columns. That is, note the first organization cited in column 68, the second in column 69, and so on to the end of the card, if necessary. Note that the entry in each column would correspond to the number associated with the organization (i.e., 1 indicates the library, 2 indicates the parent organization, etc.) which maintains the system.
14-15	22-23	Library Budget. For these two pages, column 10 is used as a flag to indicate library structure. For the first card (48 or 56) of each page, a 1 punched in column 10 indicates that the capital budget includes funds for a new building; a 2 indicates that the figure listed in bookstock budget (or expenditures) is the total materials budget.

                    Column10 of the operating budget (cards 49 and 57) should be encoded as follows:

Page Number

Form #2	Form #3	Explanation
14-15 cont'd	22-23 cont'd	1 indicates that the library only has a technical processing department without a separate acquisitions or cataloging department; in general only Administration and Interlibrary Loan can be considered in departmental analyses. 2 indicates that only Administration budget data can be considered relatively accurate; other departmental data are unavailable, or combined (as in technical service departments).
16	24	question D, regional libraries. This is the second place in the questionnaire where there can be a possible data overflow. See general instructions for use of the 9 fill. The system will not correct 99 entries internally.
18	26	question G4, union catalog additions. Change columns from (29-33) to (29-35).
19	27	question G5, union catalog locations. Change columns from (34-35) to (36-45).
20	27	questions H15-H17, stipends for regional service. In the frequent case, where all support (i.e., 100%) is from a single source, enter a 99 in the appropriate columns; the system adds 1% when both 99% and only a single source of support are indicated.
22	31	question F, number of libraries queried. Punch the number (1 through 9) corresponding to the interval checked,(e.g., 4 would be punched if the interval 2.5-2.9 were checked).
24	34	card 77, frequent borrowers and lenders. The column numbers, 71-74, for card 76 are ignored. Instead, a new card is begun for this page. Exhibit 5-2 shows the coding form. Each borrowing or source library is identified with a two-digit code where the first is library type and the second digit indicates the location of the library relative to the location of the respondent (i.e., the library completing the form). The codes are as follows:

Library Type
1 Large Academic Library
2 State Library
3 Large Public Library
4 Other Regional Library
5 Other Academic Library
6 Other Public Library
7 Bibliographic Center
8 Special Library (medical, law, etc.)
9 Other Library (private, industrial, etc.)

LOCATION (RELATIVE TO THE RESPONDING LIBRARY)
1 Local (a location within certain
   bounds of proximity that the library
   considers "close-by", based upon
   turnaround and ease of access, and
   as specified by the respondent in
   the interlibrary loan section, question A,
   page 22 of Form #2, or page 31 of
   Form #3)
2 In-State
3 Adjoining State
4 Other Western States
5 Eastern States (or foreign countries,
   excluding Canada)

See Exhibit 5-2 for coding format. Refer to
section 5.3 for definitions of the types and
sizes of libraries.

III. STAFF (CONT'D)

EXHIBIT 5-1

I. PLEASE INDICATE BELOW THE STAFF BENEFIT RATE (PERCENT OF SALARY) GIVEN TO EMPLOYEES IN EACH OF THE FOLLOWING CATEGORIES: (c28)

1. Professional librarian	_____ %	(11-14)
2. Other professional	_____ %	(15-18)
3. Library assistant	_____ %	(19-22)
4. Clerks	_____ %	(23-26)
5. Student assistant/page	_____ %	(27-30)
6. Other (excluding staff in- volved in plant maintenance)	_____ %	(31-34)

J. PLEASE INDICATE BELOW THE FULL-TIME EQUIVALENCIES (FTE) PRESENTLY EMPLOYED IN YOUR LIBRARY IN THE FOLLOWING FUNCTIONS OR POSITIONS:

1. Business and financial staff (excluding book fund bookkeepers)	_____	(35-38)
2. Book fund bookkeepers	_____	(39-42)
3. Library planning	_____	(43-46)
4. Library fund raising	_____	(47-50)
5. Systems analysts	_____	(51-54)
6. Programmers	_____	(55-58)

K. PLEASE INDICATE THE AVERAGE SALARY INCREASES GIVEN DURING THE FOLLOWING YEARS BY CATEGORIES OF EMPLOYEE. THIS SHOULD REPRESENT THE COMBINED PERCENTAGE INCREASES OF MERIT AND COST-OF-LIVING INCREASES. PROMOTIONAL INCREASES GIVEN TO EMPLOYEES MOVING INTO NEW POSITIONS SHOULD NOT BE INCLUDED.   (c29)

TYPE OF EMPLOYEE	K. 1974		L. 1975		M. 1976 (est.)	
1. Professional librarian	_____ %	(11-13)	_____ %	(14-16)	_____ %	(17-19)
2. Other professional	_____ %	(20-22)	_____ %	(23-25)	_____ %	(26-28)
3. Library assistants	_____ %	(29-31)	_____ %	(32-34)	_____ %	(35-37)
4. Clerks	_____ %	(38-40)	_____ %	(41-43)	_____ %	(44-46)
5. Student assistant/page	_____ %	(47-49)	_____ %	(50-52)	_____ %	(53-55)
6. Other(excluding staff involved in plant maintenance)	_____ %	(56-58)	_____ %	(59-61)	_____ %	(52-64)

Initials _____

XIII. INTERLIBRARY LOAN   (cont.)

EXHIBIT 5-2

W. PLEASE INDICATE BELOW INSTITUTIONS (INCLUDING BIBLIOGRAPHICAL CENTERS) WHICH MOST FREQUENTLY REQUEST MATERIALS FROM YOUR LIBRARY. RANK ACCORDING TO THE NUMBER OF REQUESTS MADE ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS RECEIVED BY YOUR LIBRARY FROM THIS LIBRARY OR CENTER DURING THE LAST REPORTING YEAR, IF THIS STATISTIC IS AVAILABLE.

LIBRARY NAME	LOCATION	NUMBER OF REQUESTS RECEIVED LAST YEAR	(c77)
1.			(11,12)
2.			(13,14)
3.			(15,16)
4.			(17,18)
5.			(19,20)
6.			(21,22)
7.			(23,24)
8.			(25,26)
9.			(27,28)
10.			(29,30)

11. WHAT PERCENT OF THE TOTAL REQUESTS RECEIVED BY YOUR LIBRARY FROM OTHER LIBRARIES (AS ENTERED IN QUESTION (J)) DO THE ABOVE REPRESENT?   _____ % (31-33)

X. PLEASE INDICATE BELOW THE TEN SOURCES (INCLUDING BIBLIOGRAPHIC CENTERS) FROM WHICH YOU MOST FREQUENTLY BORROW MATERIALS. RANK ACCORDING TO THE NUMBER OF REQUESTS THAT YOUR LIBRARY MAKES ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS MADE OF THIS INSTITUTION DURING THE LAST REPORTING YEAR IF THIS STATISTIC IS AVAILABLE.

LIBRARY NAME	LOCATION	NUMBER OF REQUESTS MADE LAST YEAR	
1.			(34,35)
2.			(36,37)
3.			(38,39)
4.			(40,41)
5.			(42,43)
6.			(44,45)
7.			(46,47)
8.			(48,49)
9.			(50,51)
10.			(52,53)

11. WHAT PERCENT OF THE TOTAL REQUESTS MADE, AS ENTERED IN QUESTION (C), DO THE ABOVE REPRESENT?   _____ % (54-56)

36.

Initials _____

5.6 Case Study Data Conversion

There are two sections of the in-depth case study instrument
(Form #3) that are not coded for keypunching in the required survey
format. These are the staff lists and associated data, pages 7 through
13, and the equipment and communications costs, pages 19 and 20.

The staff lists can be converted manually with the aid of a
calculator to conform data to the summary format of departmental staff
(as in Form #2, page 6). The user should note that the total library,
administrative department and materials finishing staff summaries are
requested on page 13 of Form #3 and are in appropriate format. All
the user need summarize are the data from the four pages of staff lists.
If more than two or three staff members appear in each section or depart-
ment, data can be more efficiently summarized with the use of the
CON subroutine as listed in the Appendix I . This subroutine converts
the staff lists (pages 7 through 10 of Form #3) to the summary output
table identical in format to that of Form #2, page 6. (A sample output
is reproduced in Appendix I .) The following four statements will access
the CON subroutine. (Reminder: FORTRAN program statements begin in
column 7):

```
LIB = 9ØØ

NOEMP = 43

CALL CON (LIB,NOEMP)

END
```

where LIB is the library number; and, NOEMP is the total number of punched
cards for employees listed on pages 7 through 10. Refer to section 4.4
for instructions on keypunching these staff lists. There must be one
card for each employee in each department. That is, if an employee
spends part of the week in cataloging and part in the acquisitions
department, this employee must have two cards for the CON subroutine
so that his/her time is entered in both departments. The only input data
required for the CON subroutine are   cards punched from these staff
lists.

Information pertaining to the staff benefit rate (item F, page 11,
lines 1 through 6) with items J through M on page 13 must be transcribed
into the survey format to fill cards 28 and 29. Refer to
section 5.5 and exhibit 5-1 for the format of these cards.

Information pertaining to equipment and communications costs,
(pages 19 and 20 of the case study instrument, Form #3) should be
transcribed to the survey format of Form #2, for preparation of cards 46
and 47. The annual cost for copying equipment rental, supplies and
maintenance in Form #3 (page 20, question C) is equivalent to question A,
page 13 of the survey instrument, Form #2, and should be input as such.
That is, the annual cost of copying is entered as the first data element

(columns 11-17) on card 46. The annual communications costs are then
entered in the remaining columns of cards 46 and 47. The order
of the information requested is the same on both instruments. However,
Form #3 does not include card and column identifiers for annual cost
information. Additional information on communications (i.e., purchase
price and date of purchase) in Form #3 should be ignored. The user should
compare the questions in Form #3 and Form #2 to verify that he/she has
transcribed the information correctly. Exhibit 5-3 is a sample page from
the survey instrument (Form #2).

5.7 Subprogram Calling Specifications

The system was written in FORTRAN and access to subroutines is
made through a short FORTRAN calling program. The data from the survey
instruments are assumed to be on tape or disk, unit 8. In addition to
these data, inputs to the calling program are two 5-digit numbers: The
first input indicates the stratum from which the user wishes to generate
the summary tables, and the second input denotes the number of libraries
in that stratum. These two may be input either from the card reader
or specified in the calling program. The number of libraries in any
one stratum must not exceed 30. The specified calling digits are as
follows:

1	Large Academic Libraries
2	State Libraries
3	Large Public Libraries
4	Other Regional Libraries
5	Other Academic Libraries
6	Other Public Libraries.

The user will note that these digits are the coded stratum
designator digits (as explained in section 5.3), plus 1.

The user must designate the unit on which the survey data is stored
as unit 8 in the job control cards he/she uses. Due to the complicated
nature of the system of programs, it is recommended that the user enter all
subroutines into a library.

IV. PROCESSING AND REFERENCE SUPPORT (cont.) EXHIBIT 5-3

M. PLEASE DESCRIBE THE PRIORITY THE LIBRARY HAS IN USING THE SYSTEM(S) DESCRIBED IN QUESTIONS (E) THROUGH (L). IF MORE THAN ONE SYSTEM IS EMPLOYED BY THE LIBRARY, INDICATE EACH SYSTEM SEPARATELY. PRIORITY ON THE SYSTEM IS CONSIDERED TO BE THE PRECEDENCE THE LIBRARY HAS IN USING THE SYSTEM (e.g. third priority after accounting and financial aids, first before any other unit may use the system).

V. EQUIPMENT, COMMUNICATIONS, AND RELATED SUPPLIES

A. PLEASE ESTIMATE THE ANNUAL COST EXPECTED DURING THE CURRENT REPORTING YEAR FOR COPYING EQUIPMENT RENTAL, SUPPLIES AND MAINTENANCE USED FOR INTERNAL LIBRARY FUNCTIONS (EXCLUDE COSTS FOR COPYING EQUIPMENT AND SUPPLIES WHICH ARE PATRON REIMBURSED, OR FOR EQUIP- MENT FOR PUBLIC USE).

$ _____ (c-46)
(11-17)

B. PLEASE ESTIMATE THE ANNUAL COSTS EXPECTED DURING THE CURRENT REPORTING YEAR FOR THE FOLLOWING AREAS OF COMMUNICATIONS AND RELATED EQUIPMENT, SUPPLIES, AND MAINTENANCE COSTS.

1. TELEX (an automatic teleprinter exchange switching service provided by Western Union) equipment rental, maintenance, supplies and communications charges.

$ _____ (18-24)

2. TELETYPE EXCHANGE SERVICE, TWX, (an automatic dialed teleprinter exchange switching service provided by Western Union on a commercial toll basis) equipment rental, maintenance, supplies and communication charges.

$ _____ (25-31)

3. DATATEL or DATEL (data or high-speed telegraph system coordinated with voice connections) equipment rental, maintenance, supplies and communications charges.

$ _____ (32-38)

4. OTHER TELETYPE SERVICE, equipment rental, maintenance, supplies and communications charges.

$ _____ (39-45)

5. FACSIMILE (FAX) TRANSMISSION (of pictures, maps, etc.), equipment rental, supplies, maintenance and communications charges.

$ _____ (46-52)

6. DATAPHONE (data or high speed telephone system), equipment rental, maintenance, supplies and communication charges.

$ _____ (53-59)

7. CRT (CATHODE RAY TUBE) OR REMOTE ACCESS TERMINAL, equipment rental, supplies, maintenance and communication charges providing interactive access to computer via a television-like screen or line printer and keyboard.

$ _____ (60-66)

8. LINE CHARGES, LEASED LINES, OTHER MEANS OF COMMUNICATIONS TO AUTOMATED SYSTEMS (COMPUTER) NOT INCLUDED IN ABOVE.

$ _____ (67-73)

9. TELEPHONE, OTHER THAN ABOVE

$ _____ (74-80)

10. OTHER COMMUNICATIONS COSTS EXPECTED (SPECIFY)

$ _____ (c47)
(11-17)

$ _____ (18-24)

$ _____ (25-31)

TOTAL COMMUNICATIONS COSTS $ _____

In the following two examples IST means the coded stratum
designator and NST indicates the number of libraries in the stratum (IST).
The potential user should be aware that other statements in these
examples are for space allocations, error control and end of job
control. These <u>must</u> be included for the job to run correctly.

```
1...5...10....5...20....5...30....5...40....5...50....5...60....5...
      DIMENSION IP(5)
      REAL*8 D(50)
      COMMON/DICT/D,IP
   1  FORMAT (2I5)
   6  READ(5,1)IST,NST
      IF(IST)4,4,5
   5 CALL DCTSRC(IST)
      K=IP(3)
      IF(K.EQ.19) STOP
C INSERT SUBROUTINE CALL STATEMENTS BETWEEN THESE TWO CARDS


C INSERT SUBROUTINE CALL STATEMENTS BETWEEN THESE TWO CARDS
      GO TO 6
   4 CONTINUE
      END
```

    Data Cards are:

    1   10
    5   18
      The data set ends with a blank card.

Or, if you have only one group, the card read can be omitted, as in the following:

```
1...5...10....5...20....5...30....5...40....5...50....5...60....5...
      DIMENSION IP(5)
      REAL*8 D(50)
      COMMON/DICT/D,IP
C INSERT IST AND NST BETWEEN THESE TWO CARDS
      IST=2
      NST=10
C INSERT IST AND NST BETWEEN THESE TWO CARDS
      CALL DCTSRC(IST)
      K=IP(3)
      IF(K.EQ.19) STOP
C INSERT SUBROUTINE CALL STATEMENTS BETWEEN THESE TWO CARDS


C INSERT SUBROUTINE CALL STATEMENTS BETWEEN THESE TWO CARDS
      END
```

See Appendix F for sample deck set ups for an IBM installation. The user should check with someone who is familiar with his/her installation for the exact form of the control cards necessary to run this job.

5.8 Subroutine Description and Calling Statements

In the following descriptions IST stands for the strata calling number (i.e., the specified calling number as described in section 5.7) and NST stands for the number of libraries in the group or stratum. The user should refer to samples of all output tables found in Appendix E.

1. SUBHLD, the subroutine to generate the holdings table (Table I) is called with the statement CALL SUBHLD (IST,NST). This subroutine uses information in cards 2-11 (from page 4 of Form #2).

2. SUBSTF is the subroutine to generate tables on staffing, either Table II, staffing for the entire library, or Table B for individual departments. The statement CALL SUBSTF (IST,NST,i) is used, where i is a single digit number 1 to 7, that coincides with the column in which the information is recorded on page 6 of Form #2. For example, a CALL SUBSTF (IST,NST,1) produces the Table II series for the entire library while CALL SUBSTF (IST,NST,3) produces the Table VIIIB series for the acquisitions department. The tables for the individual departments can also be generated in the departmental subroutines (see subroutines 7, 8, and 9 below).

3. SUBPRC, the subroutine to generate the Table III series on processing and reference support and Table IV on computer systems used within the library, from the data provided on pages 8 through 12 (of Form #2) is called with CALL SUBPRC (IST,NST).

4. SBEQCM, the subroutine to summarize the data on equipment and communications (from page 13, Form #2) into a single table is called with the statement CALL SBEQCM (IST,NST).

5. SUBBDG, is the general budget profile subroutine which generates the Tables VI and VI A for the whole library and the series of A:Budget Profile tables for the individual departments. The statement CALL SUBBDG (IST,NST,i), where i is the number of the column in which the data appear on pages 14 and 15, accesses this subroutine. For example, CALL SUBBDG (IST,NST,1) produces the Tables VI and VI A, while CALL SUBBDG (IST,NST,4) produces the Table IX A series for the cataloging department. As with the staffing subroutine, the departmental budget profile can also be produced in the subroutines for individual departments (see 7, 8, 9 below).

6. SUBRGN is the subroutine which generates the series of tables VII A through VII E, summarizing the data on regional services from pages 16 to 20 of Form #2. The statement CALL SUBRGN (IST,NST) calls this subroutine and generates the five tables for regional libraries.

7. SUBACQ is a three-part subroutine which profiles the acquisitions department. SUBACQ is called with CALL SUBACQ (IST,NST,i) where i = 1 or 2.   If i = 1, i.e., CALL SUBACQ (IST, NST,1), the entire profile is produced including Table VIII A budget and Table VIII B, Staffing and Table VIII C. If i = 2, only Table C, Ordering Patterns, is produced.

8. SUBCAT, called with CALL SUBCAT (IST,NST,i) where i is 1 or 2, as in 7 above, produces the series of 3 cataloging profile tables IX-A, budget profile, IX-B, staffing and salary expenditures, and IX-C, cataloging patterns.

9. SUBILL, as in both 7 and 8 above is called with CALL SUBILL (IST, NST, i). SUBILL can produce the entire series of inter-library loan profile tables, including budget (table X-A), staf-fing (table X-B) and volume (table X-C). If i = 1 the subroutine in turn calls both SUBBDG and SUBSTF to produce table X-A and X-B, in addition to producing Table X-C through X-L. If i = 2, then only Tables X-C through X-L are produced.

10. SUBADM produces the two tables XI, budget (A) and staffing (B) for administrative department overhead with CALL SUBADM (IST, NST).

The reader is reminded that call statements (e.g., CALL SUB____) must begin in column 7.

THE INTERLIBRARY LOAN SURVEY

6.1 Introduction

The interlibrary loan survey is based upon two instruments, one
to monitor borrowing requests (Form #8) and the other to monitor lending
requests (Form #9). As with the other instruments used in these
studies, forms #8 and #9 are coded for keypunching directly from the
form. Where the requested information is the same on the two forms,
both borrowing and lending, data are punched into the same columns.
The only differences between ILL survey instruments used by the case
study libraries and those instruments used by other libraries (Forms
#8a and #9a) in the survey, was the additional staff time spent on ILL
tasks (e.g., verification of the request) at the end of the instruments
required for the case studies. If the user wishes to analyze these
tasks on Forms #8 and #9, the same methodology as that employed in
activity sheets (Section 4) should be used. The user should make the
necessary format changes to adjust Forms #8 and #9 task data to
activity sheet specifications.

Since WILCO surveyed libraries of varied size and type, participating
libraries were asked to sample their interlibrary loan activity. This
sampling measure necessitated a weighting structure corresponding to the
sampling interval. The sampling intervals vary from every transaction
to only one transaction in twenty.

Due to the availability of excellent systems for the statistical
evaluation of a survey of this type (e.g., SPSS and OSIRIS), it was felt
unnecessary to develop original programs for this analysis. OSIRIS,
a system of canned packages developed by the University of Michigan,
was available through the IBM system used for these studies and used for
analysis of the survey.

In the interlibrary loan survey, we maintained the divisions of
libraries according to type and size, since borrowing and lending
characteristics differ widely according to these variables. The reader
should refer to section 5.3 for the method of stratification of
libraries employed in these studies.

Section 6.2 describes the keypunching procedures and section 6.3
contains a suggested list of tables that the reader may wish to generate
using one of the statistical systems available on the market.

6.2 Keypunching and Data Preparation Procedures

Similar to the format of keypunched cards for other forms
employed in these studies, the first ten columns are reserved for
identification useful to both the user and the computer system. The
following table specifies the data required in each of these ten columns.

Table 6-1. Format of the First Ten Columns

Col #	Explanation
1	form number, either 8 or 9
2,3	blank
4,5	the sampling interval (e.g., 1, 3, 5, etc.)
6	blank
7, 8, 9	library number
10	blank

On the instruments, the date of patron request or date request received (18-22) and the date of disposition (23-26) were allocated 4 columns. Each was punched as mmdd (i.e., two digits for the month and two for the day, so that May 24, 1976 would be punched 0524). The publication date (item I-B on both forms) is allocated 8 columns, and is punched mmddyyyy. The same date exampled above would be punched 05241976 in columns 28 through 35. The obvious reason for the use of four digits to indicate year of publication is to distinguish pre-twentieth century publications.

On the lender's transaction log (Form #9), item III, on re-verification can be placed in any of three columns: 48, 49, or 50. The user should be consistent in the use of the column number that he/she chooses. The remaining columns should be punched according to the specified column numbers appearing on the form.

6.3 Tables Generated for These Studies That Might be of Interest

The user can choose from a wide variety of possible correlations obtainable from the data on the forms. Obviously, the list of possible correlations is lengthy. For the interlibrary loan survey, we found that the following list of univariate and bivariate tables were useful in analyzing the data:

FOR BOTH BORROWING AND LENDING TRANSACTION LOGS

Type of publication: by publication date; by language; by reason for this type of agency; by type of agency (requester or lender); by verification tool; by form of loan requested or loaned; by fill rate.

Publication date: by all of the above; by call number classification range.

Language: by call number classification; by reason for choice of agency; by type of agency (requester or lender); by verification tool; by fill rate.

Borrower or lender type: by location; by fill rate; by communication employed; by time lag.

Delivery method: by location of agency (borrower or lender).

FOR BORROWING TRANSACTION LOGS ONLY (Form #8)

Reason for choice of agency: by type of library material requested; by fill rate; by verification tool.

Verification tool: by fill rate.

Re-requested: by time lag.

Location: by time lag.

FOR LENDERS TRANSACTION LOGS ONLY (Form #9)

Segregate results by regional/non-regional requests.

Verification (yes/no/unknown) by requesting library type.

Reason for non-fill: by type of requesting library.

Disposition of request: by type of library.

APPENDIX A

Publications List and Availability Statement

REFERENCES AND BIBLIOGRAPHY OF WILCO PUBLICATIONS

Publications listed below with a price and WICHE catalog number may be ordered, pre-paid, from Publications Unit, WICHE, P.O. Drawer P, Boulder, Colorado 80302. Other items may be requested from WILCO at the same address; items followed by an asterisk are not stocked, and Xerox copies at $.10 per page will be furnished upon request.

1. A Proposal for Design and Development of a Western Interstate Biblio-graphic Network. Western Interstate Commission for Higher Education (WICHE), Boulder, Colorado, March 21, 1975, 88p. (*)

2. Initiating the Design and Development of a Western Interstate Biblio-graphic Network. WICHE, Boulder, Colorado:
   First Quarterly Report, July-September 1975. December 15, 1975, 83p.
   Second Quarterly Report, October-December 1975. February 25, 1976, 54p.
   Third Quarterly Report, January-March 1976. May 31, 1976, 85p.
   Fourth (Final) Quarterly Report, April-August 1976, October 22, 1976,125p.
   (Cat. #2B136, $3.50)

3. Pearson, K. M. and the Project Staff. A Review of Potential Components for the Western Bibliographic Network, WICHE, March 5, 1976, 72 p. (Catalog #2B121, $2.50)

4. WILCO Newsletter. (Formerly Western Network Newsletter.) WILCO, WICHE, Boulder, Colorado. Number 1-

5. Assessing the Impact of On-Line Access to Location Data on Interlibrary Loan Patterns. WICHE, Boulder, Colorado, 5 January 1976, 67p.(*)

6. Minutes of the Western Network Project Organizing Steering Committee Meeting, Boise, Idaho, February 2-3, 1976, WICHE, February 18, 1976. (*)

7. Pearson, Karl M., Jr. Survey of Union Serials Data Bases in the West. WILCO, WICHE, Boulder, Colorado, 30 September 1976, 8 p. (N-16/000/02).(*)

8. Butler, Brett. Discussion Report: WICHE "Western Networks" Meeting, Denver, Colorado, March 203, 1976. Butler Associates/R&D Consultants, Los Altos, California, March 16, 1976, 12 p. (*)

9. Montague, Eleanor A. et al. Western Interstate Cooperative Bibliographic Network Alternatives for Action. WICHE, Boulder, Colorado, March 1976, 66 p. (Draft working paper; limited distribution.)

10. A Proposal for Facilitating Equitable Interstate Sharing of Library Resources in the West. WICHE, Boulder, Colorado, March 31, 1976, 57p.(*)

11. Duggan, Maryann. The WICHE Project for Continuing Education of Library Personnel: An Analytical Summary of the Past and Alternatives for the Future. WICHE, Boulder, Colorado,March 1976, 67p. (working paper, limited distribution)

12. Gassler, Scott, Economic Issues in the Networking of Library Technical Support Services. WICHE, Boulder, Colorado, October 1976, 20p.(Cat. #2B131, $1.50)

13. Library Networking in the West: The Next Three Years. WILCO, WICHE, September 1976, 19p. (Fifth Draft) (Cat. #2B127)

14. Telecommunications and Message Processing for Library Networking: A System Concept and Proposal Outlines. WILCO, WICHE, July 7, 1976, 12 p. (*)

15. Survey of Costs in Technical Processing and Interlibrary Loan -- Survey Tables and Cast Studies Results (Cat. #2B129, $not set yet)

16. Survey of Costs in Technical Processing and Interlibrary Loan -- Summary (Cat. #2B130, $not set yet)

17. Librarian's Handbook for Costing Network Services (Cat. #2B134, $not set yet)

18. Costs in Technical Processing and Interlibrary Loan -- Data Processing Users Manual (Cat. #2B133, $not set yet)

19. Final Report of the Project "Conducting Cost and Funding Studies Concerning Development and Implementation of Western Interstate Bibliographic Network" (Cat.#2B132, $not set yet)

The potential user who wishes copies of the programs for the analysis of the survey data should contact the WICHE Publications Unit, P.O. Drawer P., Boulder, Colorado 80302 for availability and cost information.

APPENDIX B

DEFINITION OF TERMS AND MATHEMATICAL FORMULAE

Alphabetic Codes: Codes containing any letters from the alphabet.

Alphanumeric Codes: Codes containing alphabetic and numeric characters.

Average (Arithmetic Mean): the number obtained by dividing the sum of a set of numbers by the number of elements in the set.

Bivariate Analysis: the analysis of the dynamic relationship between two variables (i.e., to what degree (if any) do two variables change with respect to one another). An analysis of the joint distribution of two variables. For example, the analysis of library funding with respect to inflation.

Blank: code used to indicate missing data; a blank column is one that contains no punch. Indicated in this text as ƀ.

Call Statement: A program statement which transfers control of the program to a subprogram. This subprogram returns control of the program to the next statement of the main body of the program when it is finished (usually indicated by a RETURN statement.)

Card: A data storage medium which is used to enter information into a computer by means of a series of holes punched into it. The standard punched card is 7 3/8 inches (18.7cm) wide and 3 1/4 inches (8.2cm) high and contains 80 columns for information.

Card Number: Code used when there is more than one card of input to indicate the sequence of input.

Character: One numeric digit, alphabetic character, or punctuation mark.

Column: One of 80 vertical sections (positions) of a punched card. Each column may contain a single character, e.g., a 1 is a 1 punch in a column.

Data: Numerical information in a form appropriate for processing by the computer.

Data element: A single piece of numerical information. For example, 26 would represent a data element, however 2, and 6, would represent two data elements.

Data Set: The set of all data elements which logically belong together and are ready to input to the computer.

Deck: A set of punched cards.

Dictionary: A list of words or partial words, or sets of words which are combined to form sentences, phrases or other words for output or for identification of output (e.g., table titles, column headers on printed output). The dictionary simplifies PRINT statements within the program. It is often more efficient to have the system write words numbered 5, 7, 10, 20 on line one, and words numbered 5, 6, 8, 11, 21 on line two, than to have commands within the program for the system to write:

    "the quick brown fox," and

    "jumped over the lazy dog."

Disk: A data storage medium, similar to tape in terms of usage.

Field: a single column or a series of columns on a punched card which specifies a single data element. The field of columns 16-20 contains 5 columns, 16, 17, 18, 19, and 20.

FORTRAN: (FORmula TRANslator). The name given to a system which translates formulae into the computer's language. One of the oldest and best standardized (ANS-American National Standard) languages in the computer business. All FORTRAN statements must start in column 7. Programs written in ANS (American National Standard) FORTRAN are generally portable between systems from the same manufacturer and between machines from different manufacturers.

ID Number: The unique identifying number for every respondent (library or employee) for which there are data needs.

Input: The set of data or information which is fed to the computer for processing.

Input Stream: The ordering of the input to a computer system. For example, card 11 comes before card 12. That is, the deck of input information, in the appropriate order which the computer must (or expects) to read data.

JCL: Job control language, usually used in system control statements at the beginning and end of programs; Each machine usually has a unique JCL.

Job: A computer run, including programs and data which produces output.

Keypunch: A machine to punch (or prepare) cards for input. The keyboard of the machine resembles a typewriter, and by striking a key, the machine produces the appropriate holes in the card for the computer to "read" the character of number as reflected on the key. Also, the process of punching data onto cards.

<u>Output</u>: The set of data which the computer produces by processing or massaging the the input; the results obtained from the running of a program. In this system all output is printed.

<u>Print-Out</u>: Output on paper.

<u>Program</u>: A series of statements to instruct the computer to perform manipulations on input and produce output.

<u>Punch</u>: The square holes on a computer card designating numeric and alphabetic codes in each column of card; the process of keypunching.

<u>Right Justified</u>: Information (data) is placed as far to the right in the allocated field as possible. That is, if the allocated field is (16-20), the number 26 is punched ƀƀƀ26 (where ƀ means a blank column) and not ƀ26ƀƀ (which would be read as 2600).

<u>Standard Deviation</u>: A statistical measure equal to the square root of the variance. The variance is the sum of the squares of the differences of observations from the mean. The standard deviation indicates a relative closeness of the set of data to the mean. A large standard deviation relative to the magnitude of the arithmetic mean implies that the data are not grouped near the mean.

<u>Subprogram</u>: See subroutine.

<u>Subroutine</u>: A program which is called from another program or subprogram. All data and statements are independent from the calling program. Control of the flow of the processing of the data is transferred to the subroutine through the "CALL" statements, and data are passed through allocated blocks of data storage "common" to both programs.

<u>System</u>: A series of connected programs to process data and produce output. The difference between a system and a series of programs is that with the system the user is able to select the output he/she desires and to some extent the input he/she intends to provide, while with a program the user is confined to the specified input and the specified output.

<u>Tape</u>: A data storage medium for the computer.

<u>Univariate Analysis</u>: The analysis of the responses to a single question. That is, an analysis of the distribution of a single variable over all observations.

<u>Verification</u>: The process of checking punched cards (or tape) for accuracy.

MATHEMATICAL FORMULAE

Average (mean) of i elements of weight f_i

$$\bar{x} = \frac{\sum f_i x_i}{\sum f_i}$$

Standard Deviation, of i elements of weight f_i, with mean $\bar{x}$

$$\mu_2 = \frac{\sum f_i (x_i - \bar{x})^2}{\sum f_i}$$

Holdings Growth

$$\Delta H = \frac{\sum_{i=2}^{4} HLD_i - HLD_{i-1}}{\sum_{i=2}^{4} HLD_i} \quad \text{where } HLD_i = \text{non-zero for year i}$$

Average Salary per FTE

$$SF = \frac{\sum \text{salaries}}{\sum FTE} \begin{cases} \text{for each employee grouping,} \\ \text{for total library and/or each department} \end{cases}$$

Percent of budget allocated to ____ (any department)

$$PB = \frac{\text{department budget}}{\text{total library budget}} \times 100$$

Annual budget expenditure per throughput

$$EPT = \frac{\text{department expenditure last reporting year}}{\text{department items processed last reporting year}}$$

Hourly cost (for those employees on annual salary)

$$HC = \frac{AS(1+FB)}{(2080 - 8 \times DZOF - SAB) \times K \times K'}$$

Where AS = annual salary
FB = fringe benefit rate as stated/100
DZOF = total paid holidays annually
SAB = days of sabbatical accrued annually
K = fraction of week worked if less than 40 hours
K' = fraction of year worked if less than 12 months

Hourly cost (for those employees that receive hourly wages)

$$HC = HW (1+FB)$$
Where HW = hourly wages as stated and FB = fringe benefit rate as stated/100

APPENDIX C

SAMPLES OF REVISED PAGES

III. STAFF (CONT'D)

PLEASE INDICATE IN THE FOLLOWING TABLE, THE FULL-TIME EQUIVALENCIES IN EACH CATEGORY. PLEASE INCLUDE OPEN POSITIONS AS WELL. ALSO FOR EACH CATEGORY, INDICATE THE TOTAL ANNUAL SALARY EXPENDITURE, EXCLUDING FRINGE BENEFITS. INCLUDE OPEN POSITIONS IN SALARY CALCULATIONS ALSO. NOTE THAT SALARY EXPENDITURES SHOULD CORRESPOND TO THE NUMBER OF FULL-TIME EQUIVALENCES (FTE) IN EACH CATEGORY.

FULL-TIME EQUIVALENCIES(FTE)	A. TOTAL LIBRARY (11-20)	B. ADMINISTRATION (21-30)	C. ACQUISITIONS DEPARTMENT (31-40)	D. CATALOGING DEPARTMENT (41-50)	E. SERIALS DEPARTMENT (51-60)	F. INTERLIBRARY LOAN DEPARTMENT (61-70)	G. MATERIALS FINISHING (71-80)	H. ALL OTHER	
1. Professional librarian									(c13)
2. Other professional									(c14)
3. Library assistant									(c15)
4. Clerks									(c16)
5. Student assistant/page									(c17)
6. Other (excluding staff involved in plant maintenance)									(c18)
Subtotal of staff paid by library									
7. Staff paid by outside sources									(c19)
8. Volunteers									(c20)
Total FTE									
SALARIES									
9. Professional librarian	$	$	$	$	$	$	$	$	(c21)
10. Other professional	$	$	$	$	$	$	$	$	(c22)
11. Library assistant	$	$	$	$	$	$	$	$	(c23)
12. Clerks	$	$	$	$	$	$	$	$	(c24)
13. Student assistant/page	$	$	$	$	$	$	$	$	(c25)
14. Other (excluding staff involved in plant maintenance)	$	$	$	$	$	$	$	$	(c26)
Total salaries paid by the library	$	$	$	$	$	$	$	$	(c27)

I. STAFF (CONT'D)

I. PLEASE INDICATE BELOW THE STAFF BENEFIT RATE (PERCENT OF SALARY) GIVEN TO EMPLOYEES IN EACH OF THE FOLLOWING CATEGORIES:

(c20)

1. Professional librarian ___% (11-14)
2. Other professional ___% (15-18)
3. Library assistant ___% (19-22)
4. Clerks ___% (23-26)
5. Student assistant/page ___% (27-30)
6. Other (excluding staff in-volved in plant maintenance) ___% (31-34)

J. PLEASE INDICATE BELOW THE FULL-TIME EQUIVALENCIES (FTE) PRESENTLY EMPLOYED IN YOUR LIBRARY IN THE FOLLOWING FUNCTIONS OR POSITIONS:

1. Business and financial staff (excluding book fund bookkeepers) _____ (35-38)
2. Book fund bookkeepers _____ (39-42)
3. Library planning _____ (43-46)
4. Library fund raising _____ (47-50)
5. Systems analysts _____ (51-54)
6. Programmers _____ (55-58)

K. PLEASE INDICATE THE AVERAGE SALARY INCREASES GIVEN DURING THE FOLLOWING YEARS BY CATEGORIES OF EMPLOYEE. THIS SHOULD REPRESENT THE COMBINED PERCENTAGE INCREASES OF MERIT AND COST-OF-LIVING INCREASES. PROMOTIONAL INCREASES GIVEN TO EMPLOYEES MOVING INTO NEW POSITIONS SHOULD **NOT** BE INCLUDED.

(c23)

TYPE OF EMPLOYEE	K. 1974	L. 1975	M. 1976 (est.)
1. Professional librarian	% (11-13)	% (14-16)	% (17-19)
2. Other professional	% (20-23)	% (23-25)	% (26-28)
3. Library assistants	% (29-31)	% (32-34)	% (35-37)
4. Clerks	% (38-40)	% (41-43)	% (44-46)
5. Student assistant/page	% (47-49)	% (50-52)	% (53-55)
6. Other(excluding staff involved in plant maintenance)	% (56-58)	% (59-61)	% (62-64)

Initials _____

IV. PROCESSING AND REFERENCE SUPPORT   (cont.)

W. PLEASE DESCRIBE THE PRIORITY THE LIBRARY HAS IN USING THE SYSTEM(S) DESCRIBED IN QUESTIONS (E) THROUGH (L). IF MORE THAN ONE
SYSTEM IS EMPLOYED BY THE LIBRARY, INDICATE EACH SYSTEM SEPARATELY. PRIORITY ON THE SYSTEM IS CONSIDERED TO BE THE PRECEDENCE THE
LIBRARY HAS IN USING THE SYSTEM (e.g. third priority after accounting and financial aids, first before any other unit may use the system).

V. EQUIPMENT, COMMUNICATIONS, AND RELATED SUPPLIES

A. PLEASE ESTIMATE THE ANNUAL COST EXPECTED DURING THE CURRENT REPORTING YEAR FOR COPYING EQUIPMENT RENTAL, SUPPLIES AND MAINTENANCE
USED FOR INTERNAL LIBRARY FUNCTIONS (EXCLUDE COSTS FOR COPYING EQUIPMENT AND SUPPLIES WHICH ARE PATRON REIMBURSED, OR FOR EQUIP-
MENT FOR PUBLIC USE).

(c-6)

$ _____   (11-17)

B. PLEASE ESTIMATE THE ANNUAL COSTS EXPECTED DURING THE CURRENT REPORTING YEAR FOR THE FOLLOWING AREAS OF
COMMUNICATIONS AND RELATED EQUIPMENT, SUPPLIES, AND MAINTENANCE COSTS.

1. TELEX (an automatic teleprinter exchange switching service provided by Western Union) equipment
    rental, maintenance, supplies and communications charges.

$ _____   (18-24)

2. TELETYPE EXCHANGE SERVICE, TWX, (an automatic dialed teleprinter exchange switching service
    provided by Western Union on a commercial toll basis) equipment rental, maintenance, supplies
    and communication charges.

$ _____   (25-31)

3. DATATEL or DATEL (data or high-speed telegraph system coordinated with voice connections)
    equipment rental, maintenance, supplies and communications charges.

$ _____   (32-38)

4. OTHER TELETYPE SERVICE, equipment rental, maintenance, supplies and communications charges.

$ _____   (39-45)

5. FACSIMILE (FAX) TRANSMISSION (of pictures, maps, etc.), equipment rental, supplies, maintenance
    and communications charges.

$ _____   (46-52)

6. DATAPHONE (data or high speed telephone system), equipment rental, maintenance, supplies and
    communication charges.

$ _____   (53-59)

7. CRT (CATHODE RAY TUBE) OR REMOTE ACCESS TERMINAL, equipment rental, supplies, maintenance and
    communication charges providing interactive access to computer via a television-like screen or
    line printer and keyboard.

$ _____   (60-66)

8. LINE CHARGES, LEASED LINES, OTHER MEANS OF COMMUNICATIONS TO AUTOMATED SYSTEMS (COMPUTER) NOT
    INCLUDED IN ABOVE.

$ _____   (67-73)

9. TELEPHONE, OTHER THAN ABOVE.

$ _____   (74-80)

10. OTHER COMMUNICATIONS COSTS EXPECTED (SPECIFY)

(c47)

$ _____   (11-17)
$ _____   (18-24)
$ _____   (25-31)

TOTAL COMMUNICATIONS COSTS

$ _____

Initials _____

XIII. INTERLIBRARY LOAN   (cont.)   EXHIBIT 5-2

W. PLEASE INDICATE BELOW INSTITUTIONS (INCLUDING BIBLIOGRAPHICAL CENTERS) WHICH MOST FREQUENTLY REQUEST MATERIALS FROM YOUR LIBRARY. RANK ACCORDING TO THE NUMBER OF REQUESTS MADE ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS RECEIVED BY YOUR LIBRARY FROM THIS LIBRARY OR CENTER DURING THE LAST REPORTING YEAR, IF THIS STATISTIC IS AVAILABLE.

LIBRARY NAME	LOCATION	NUMBER OF REQUESTS RECEIVED LAST YEAR	(c77)
1.			(11,12)
2.			(13,14)
3.			(15,16)
4.			(17,18)
5.			(19,20)
6.			(21,22)
7.			(23,24)
8.			(25,26)
9.			(27,28)
10.			(29,30)

11. WHAT PERCENT OF THE TOTAL REQUESTS RECEIVED BY YOUR LIBRARY FROM OTHER LIBRARIES (AS ENTERED IN QUESTION (J)) DO THE ABOVE REPRESENT? _____ % (31-33)

X. PLEASE INDICATE BELOW THE TEN SOURCES (INCLUDING BIBLIOGRAPHIC CENTERS) FROM WHICH YOU MOST FREQUENTLY BORROW MATERIALS. RANK ACCORDING TO THE NUMBER OF REQUESTS THAT YOUR LIBRARY MAKES ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS MADE OF THIS INSTITUTION DURING THE LAST REPORTING YEAR IF THIS STATISTIC IS AVAILABLE.

58.

LIBRARY NAME	LOCATION	NUMBER OF REQUESTS MADE LAST YEAR	
1.			(34,35)
2.			(36,37)
3.			(38,39)
4.			(40,41)
5.			(42,43)
6.			(44,45)
7.			(46,47)
8.			(48,49)
9.			(50,51)
10.			(52,53)

11. WHAT PERCENT OF THE TOTAL REQUESTS MADE, AS ENTERED IN QUESTION (C), DO THE ABOVE REPRESENT? _____ % (54-56)

Initials _____

APPENDIX D

SAMPLES OF CORRECTLY PUNCHED DATA

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20404 410                                          186982                           1611                4      80
20405 410                                          222049                           1697                5      80
20406 410                                          243928                           1797                6      80
20407 410         614617                                                                                 7      80
20408 410         621875                                                                                 8      80
20409 410         639186                                                                                 9      80
2 410 410         676387                                                                                10      80
2 411 410         693387                                                                                11      80
20412 410         770012                        98 100                                        .10       12      80
20613 514         58.1          1         .10    4.10           1             .05                        13      80
20614 514                    2.25  .05                                                                   14      80
20615 514         2       1.95       .05          2            .75                                       15      80
20616 514         35.7            1              2      .75          1                         3.75      16      80
20617 514         48.95   6.05    2.95   .25      7     1.25                   1                          17      80
20618 514         37.85                           .5                                                     18      80
20619 514         55            1                2                                                       19      80
20620 514         12                             .5                                                      20      80
20621 514         879197  50550   1932           61380         13716           539            1818      21      80
20622 514         33288   32704   584                          7947                                     22      80
20623 514         392096          10596           21192         11865                                   23      80
20624 514         451817  56702   27514           64812         11865          9486           33750     24      80
20625 514         284783          1881            3767                                                   25      80
20626 514                                                                                                26      80
20627 514         2041182 139955  42508           151146        33528          10025           35568     27      80
20728 514         16  16  16  16  16  6  1  3                                                            28      80
20729 514         6,69,66,25,15,36,27,07,56,27,58,56,27,58,56,86.2   11746                               29      80
31430 002         1                                             -1 3500      -1                          30      80
31431 002         12000   0         -1                          52           -1                          31      80
31432 002         12      0         -1            35000         -131000       -1                         32      80
31533 002         99999   0         -1            99999         -1 3000       -1                          33      80
31534 002                                                                                                34      80
31535 002         183     12        -1    317     0  239        -1  31        -1                          35      80
31536 002                 1850                                                                           36      80
31537 002         3500    720       -1    247     0             -1                                       37      80
31638 002         1043                            11679                                                  38      80
31639 002         9       -1                      20000         -1                                        39      80
31640 002                                                                                                40      80
31641 002                         1540           0                                                       41      80
31642 002         540     0        6120           0  360        282  4         77                         42      80
31643 002         4220    0                                                                               43      80
31744 002                          211            1  2          0  11468                                 44      80
31845 002                                                                      13                        45      80
31946 002         5000    850      16000          2530          37560                           11318    46      80
31947 002                          198490                                                                47      80
32248 101         3900    30000                                                500            17000      48      80
32249 1011        641962  147097                               57945          57945                      49      80
32250 101                                                                                                50      80
32251 101         25999   2976     3925                                        2720                      51      80
32252 101         13000   3348     1650                                        2880                      52      80
32253 101         22100   2976     3400                                        10400                     53      80
32254 101         11435   2750     3500                                        1600                      54      80
32255 101         26425   10104    6309            2250                         1476            2931      55      80
32256 101         34730   28656    14263                        15600                                   56      80
1....5...10....5...20....5...30....5...40....5...50....5...60....5...70....5...80....5...90...5..100  RECORD #  LENGTH
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                24637A     42265      6032     12742      6519     22920      9634                                 57      80
32357 102                                                                                                          58      80
32358 102       8500                                                                                               59      80
32359 102       6000                                                          8500                                 60      80
32360 102       16222                                                                                              61      80
32361 102       28020                                                         1920                                 62      80
32362 102       55800                                                                                              63      80
32363 102                                                                                                          64      80
32464 301  111  4    311 111 111  111   1  1   188470  51310 0 0 2 0                                               65      80
32665 301  1    7    70000 50000  70000 1                                                                          66      80
32766 301  1         247189                                                                                        67      80
32767 301  099                                                                                                     68      80
32968 301            23562 1  99  1 0 0 1  11183   419                0  10 08A 2 4                                 69      80
33069 301  25  7  5  2  1884  184104020 4 51214412 5954               637                                          70      80
33370 301            1600      1600   500              500                                                         71      80
33371 301  200               200   137              137                                                            72      80
33372 301  30                30                                                                                    73      80
33373 301                                                                                                          74      80
33374 301            14       14                                                                                   75      80
33375 301                                                                                                          76      80
33376 301            1844                                                                                           77      80
33477 301  2273426161    90732242426161          90                   637
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7  201  0001      6  120  25                                                                                      2    80
7  201  0001      7   75  25                                                                                      3    80
7  201  0001      9  240  15                                                                                      4    80
7  201  0001     10  100  50                                                                                      5    80
7  201  0001     11  200                                                                                          6    80
7  201  0001     14   20   2                                                                                      7    80
7  201  0001     16   30   3                                                                                      8    80
7  201  0001     17   20  25                                                                                      9    80
7  201  0001     20   60  12                                                                                     10    80
7  201  0001     21  300  40                                                                                     11    80
7  201  0001     22   35   7                                                                                     12    80
7  201  0001     23  320  30                                                                                     13    80
7  201  0001     25  470  35                                                                                     14    80
7  201  0001     26   25  25                                                                                     15    80
7  201  0001     27   70  20                                                                                     16    80
7  201  0001     28  270  35                                                                                     17    80
7  201  0001     30   20   3                                                                                     18    80
7  201  0001     31   40  10                                                                                     19    80
7  201  0001     33  305  60                                                                                     20    80
7  201  0001     34  220                                                                                         21    80
7  201  0001     35  150                                                                                         22    80
7  201  0002      1   40  60                                                                                     23    80
7  201  0002      2   10   2                                                                                     24    80
7  201  0002      4   50  55                                                                                     25    80
7  201  0002      5   30  30                                                                                     26    80
7  201  0002      6   45  32                                                                                     27    80
7  201  0002     10   20   2                                                                                     28    80
7  201  0002     11  115  61                                                                                     29    80
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80005 009  15052806022  19531         211 4135312
80005 009  16052806224  18701         212  315111
80005 009  17005206284  18511         212  315111
80005 009  11505206104          1180  212  211111
80005 009  10505240623  19561180      212  211111
80005 009  19005280611  19771         212  315111
80005 009  19505280611  19752         562  215311
80005 009  17505206172  19701         212  315111
80005 009  15005270610  19701         217  315111
80005 009  13505206102  19717         462  215311
80005 009  14005206001  19751        3262  315111
80005 009  13005206102  19671        3262  315111
80005 009  12005250609  19751         217  211111
80005 009  11005280610  19751180      217  211111
80005 009  10005210527  19681180      214  211111
80005 009  14505270610  19551017 5    462  215311
80005 009  16005280622  19751         212  315111
80005 009  18005280610  19341 9794    212  315111
80005 009  18504280710  19701         212  315111
80005 009  12505280617  19691         212  315111
                        19711        3262  315111

1....5...10....5...20....5...30....5...40....5...50....5...60....5...70....5...80....5...90....5..100        RECORD #  LENGTH
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90020  011   405 071607202 19751    2 422 35                                                                            57      80
90020  011   109 070907092 19721    6  23    27                                                                         58      80
90020  011   229 070907092 19754    2 132 3627                                                                          59      80
90020  011   725 071307162 19761    1 132 36                                                                            60      80
90020  011   468 071607162 19671    1 222 35                                                                            61      80
90020  011    37 071507162 19751    2 132 36                                                                            62      80
90020  011   871 071407164 19741    2 232 35                                                                            63      80
90020  011   384 071607162 19691    2 132 35                                                                            64      80
90020  011   701 071607162 19743    2 132 35                                                                            65      80
90020  011   157 071507162 19731    2 132 36                                                                            66      80
90020  011   194 071507199     2    2 131  5                                                                            67      80
90020  011   654 071907192 19751    1 242 36                                                                            68      80
90020  011   563 071607192 19751    2 232 35                                                                            69      80
90020  011   112 071407264     2    2 232    56                                                                         70      80
90020  011   586 071207124 19741    2 232    26                                                                         71      80
90020  011   783 071907232 19771    2 332 35                                                                            72      80
90020  011   449 071607222 19751    2 332 35                                                                            73      80
90020  011   292 071507224 19741    2 232 35                                                                            74      80
90020  011   168 072007222 19651    2 132 35                                                                            75      80
90020  011   341 071507162 19631    2 132 35                                                                            76      80
90020  011   115 071507162 19673    2 132 35                                                                            77      80
90020  011   458 071007162  1975    2 232 35                                                                            78      80
90020  011   257 071507162 19741    2 232 35                                                                            79      80
90020  011   831 071407204 19541    2 132 15                                                                            80      80
90020  011    74 071407162 19112    1 242    27                                                                         81      80
90020  011   920 072007232 19651    2 132 35                                                                            82      80
90020  011   419 071607262 19711    2 432 57                                                                            83      80
90020  011   595 071207162 19751    1 422 57                                                                            84      80
90020  011    39 071407162          2 322 57                                                                            85      80
90020  011  2000 071407261 19491    1 422 26                                                                            86      80
90020  011   972 071407204 19751    1 422 57                                                                            87      80
90020  011   635 071907202 19751    2 132 16                                                                            88      80
90020  011   969 072007203 19621    2 132 36                                                                            89      80
                                                                                                                        90      80
                                                                                                                        91      80
                                                                                                                        92      80

......92 READ 6 ......92 WRITTEN..DOTS-EOJ.. COND CODE=0000
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APPENDIX E

TABLES GENERATED FROM THE SURVEY INSTRUMENT DATA

and volume processed or purchased annually. Support services include pre-processing, automated cataloging systems, printed card sets and automated buying.

Table IV: Unique Computer Support: A table of self-contained support systems developed exclusively for the library by contract and used exclusively by the library or parent institution, or an automated system developed for the library in-house by library staff or staff from the parent organization, are analyzed by function, developmental and annual maintenance costs. These systems often support several functions; however, in presentation only the first function supported is indicated.

Table V: Equipment and Communications Costs: The annual costs for copying, TELEX, TWX, Datatel, other teletype communications, facsimile transmission, dataphone, remote access terminals, lines to a computer center and telephone are displayed.

Table VI: Budget and Expenditure Patterns: A summary of the current year budget, and the related increases (or decreases) over last year's expenditures are included. Budget categories include capital expenditures, materials budgets, and operating budgets.

Table VI-A: Budget and Expenditure Patterns: Departmental Allocations: Four separate tables indicating the percent of budget allocated to adminstration, acquisitions, cataloging, serials, interlibrary loan and materials finishing by budget category.

Table VII-A: Regional Library Summary--Services Provided by Regional Libraries: A table indicating the number of libraries providing regional support to other libraries in the region by type of support service.

Table VII-B: Regional Library Summary--Types of Libraries Supported: The types of libraries (public, academic, school, special) in the region supported by participants, and the number of libraries supported.

Table IX-B: Cataloging Department--Staffing and Salary Expendi-
             tures: A summary of staffing patterns within
             cataloging department, title throughput per cataloging
             FTE, and related cataloging salary costs per throughput.

Table IX-C: Cataloging Department--Cataloging Patterns: An
             overview of the types of materials cataloged annually,
             the cataloging source used, lag times, backlog,
             and cards per record entry. Proof slip subscriptions
             are also examined.

Table X-A: Interlibrary Loan Department--Budget Profile: Two
            tables indicating departmental budget, and increases
            (or decreases) over previous year budgets, along
            with expenditures per request throughput (both
            borrowing and lending).

Table X-B: Interlibrary Loan Department--Staffing and Salary
            Expenditures: A two-page summary of staffing patterns
            within interlibrary loan, including salary expendi-
            tures, average salaries by type of employee, volume
            and average salary cost per request (both borrowing
            and lending).

Table X-C: Interlibrary Loan Department--Volume of Borrowing
            Requests: A summary of ILL borrowing requests,
            including fill rate, percent filled locally (a
            designation made by the participant to indicate
            geographical proximity for which interlibrary loan
            turnaround was lowest) and percent filled within
            the state of the participant.

Table X-D: Interlibrary Loan--Number of Institutions Typically
            Queried: A synopsis of the number of libraries typi-
            cally queried by respondents prior to a completed
            (filled or discontinued) request, indicating the mean
            and mode.

Table X-E: Interlibrary Loan Department--Time Required to
            Fill a Request: A summary of the typical lag time
            of requests to completion through a bibliographic
            center, a local library, elsewhere in state, in
            adjoining states and elsewhere in the country.

Table X-F: Interlibrary Loan Department--Verification Policies:
            A summary of the libraries reporting verification
            of borrowing and lending requests.

Table X-G: Interlibrary Loan Department--Frequency of Borrowers
             Table: A summary by type of library of the ten most
             frequent borrowers of materials from respondents,
             and observed ranks of these types of libraries.

Table X-H: Interlibrary Loan Department--Frequency of Lenders
             Table: A summary by type of library of the ten most
             frequent lenders of materials to respondents and the
             observed ranks of these types of libraries.

Table X-I: Interlibrary Loan Department--Location of Borrowers
             Table: A summary by location (local, elsewhere in
             state, adjoining states, other western states, else-
             where) of the ten most frequent borrowers of materials
             cited by respondents, and the observed ranks of these
             locations.

Table X-J: Interlibrary Loan Department--Location of Lenders
             Table: A summary by location (local, elsewhere in
             state, adjoining states, other western states, and
             elsewhere) of the ten most frequent lenders of
             materials to participants cited by respondents, and
             the observed ranks of these locations.

Table X-K: Interlibrary Loan Department--Characteristics of Filled
             Borrowing Requests: A two-page report of volume of
             requests filled from the participating library
             collection by type of materials, and percentage loaned
             in original or duplicate form.

Table X-L: Interlibrary Loan Department--Characteristics of Filled
             Lending Requests: A two-page summary of requests lent
             to the participating library by type of materials,
             form of loan and volume of filled requests.

Table XI-A: Administration Department Budget Profile: Two tables
             indicating departmental operating budget for admini-
             stration, and increases (or decreases) over previous
             year's expenditures, along with a summary of last
             year's expenditures in administration.

Table XI-B: Administration Department--Staffing and Salary
             Expenditures: Two tables summarizing staffing patterns
             within library administration by type of employee,
             and indicating salary expenditures, and salary
             expenditures per total library staff.

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE 1: HOLDINGS DISTRIBUTION
10 LIBRARIES INCLUDED

TYPE OF PUBLICATION	NUMBER OF LIBRARIES REPORTING	TITLES AVERAGE	LOW	HIGH	STD DEV	GROWTH	NUMBER OF LIBRARIES REPORTING	VOLUMES AVERAGE	LOW	HIGH	STD DEV	GROWTH
BOOKSTOCK	8	744104	378750	980000	177951.	0.06	10	1290306	473437	2040000	477456.	0.06
BOUND PERIODICALS	0	0	0	0	0.	0.0	3	220039	167377	254928	37888.	0.06
MICROFORM BOOKS	4	1147126	8505	1690000	645710.	0.11	0	0	0	0	0.	0.0
MICROFORM PERIODICALS	2	352	75	630	278.	0.25	0	0	0	0	0.	0.0
PRINTED GOVERNMENT DOCUMENTS	8	446328	89640	960000	305609.	0.07	0	0	0	0	0.	0.0
AUDIO / VISUAL MATERIALS	8	139461	2226	598084	196290.	0.08	0	0	0	0	0.	0.0
OTHER	3	137266	3700	359100	157293.	0.01	0	0	0	0	0.	0.0

TYPE OF PUBLICATION	NUMBER OF LIBRARIES REPORTING	VOLUME TO TITLE RATIO AVERAGE	LOW	HIGH	STD DEV
BOOKSTOCK	8	1.62:1	1.15:1	2.10:1	0.35
BOUND PERIODICALS	0	0.0:1	0.0:1	0.0:1	0.0

A: SURVEY OF 100 LIBRARIES. LARGE   ACADEMIC STRATUM

TABLE II: STAFFING DISTRIBUTION, ENTIRE LIBRARY
         10 LIBRARIES INCLUDED

TYPE OF EMPLOYEE	NUMBER OF LIBRARIES REPORTING	FULL TIME EQUIVALENCIES				NUMBER OF LIBRARIES REPORTING	ANNUAL SALARY EXPENDITURES,$			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	10	59.82	35.00	103.25	22.12	10	968213.	563440.	1837566.	382695.
OTHER PROFESSIONAL	8	2.50	1.00	7.00	2.12	8	40433.	13600.	118908.	34955.
LIBRARY ASSISTANT	10	107.27	35.00	299.00	75.18	10	989030.	273068.	3116925.	809330.
CLERK	9	27.00	4.00	64.00	18.75	9	182397.	37644.	322966.	98563.
STUDENT / PAGE	9	54.73	21.97	95.32	23.42	10	255030.	20200.	497677.	140476.
OTHER	5	3.90	0.50	7.00	2.27	5	40363.	7524.	65748.	23339.
STAFF PAID BY OUTSIDE SOURCES	7	12.59	0.50	31.62	12.56	0	0.	0.	0.	0.
VOLUNTEER	1	0.25	0.25	0.25	0.0	0	0.	0.	0.	0.

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	AVERAGE SALARY PER FTE				NUMBER OF LIBRARIES REPORTING	FRINGE BENEFIT RATES			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	598.25	16184.	14098.	18561.	1748.	10	14.35%	11.00%	20.00%	2.53
OTHER PROFESSIONAL	20.00	16173.	13600.	20000.	1550.	8	15.19%	11.00%	20.00%	2.77
LIBRARY ASSISTANT	1072.70	9220.	5943.	10636.	1469.	10	14.86%	11.00%	20.00%	3.03
CLERK	243.00	6755.	5046.	11083.	1765.	9	15.01%	11.00%	20.00%	3.06
STUDENT / PAGE	492.54	5137.	3952.	8567.	1022.	6	3.84%	0.60%	10.10%	3.24
OTHER	19.50	10349.	7037.	15048.	2330.	5	11.98%	0.61%	17.30%	5.90

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
10 LIBRARIES INCLUDED
1 LIBRARIES USING NO OUTSIDE SUPPORT
9 LIBRARIES USING OUTSIDE SUPPORT
0 LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	LIBRARIES INDICATING AVAILABLE TASK DATA	AVERAGE	ANNUAL VOLUME LOW	ANNUAL VOLUME HIGH	STD DEV
ACQUISITIONS						
1. SEARCHING FOR NEW TITLES	3	2	33000.	16000.	50000.	17000.
2. CHECKING THAT TITLES ARE NOT IN LIBRARY	0	0	0.	0.	0.	0.
3. CHECKING THAT TITLES ARE NOT BACK-ORDERED	1	0	0.	0.	0.	0.
4. PRODUCING ORDERS FOR MATERIALS	4	4	46325.	8555.	90000.	36579.
5. PRODUCING CLAIM/CANCEL NOTICES	2	1	3500.	3500.	3500.	0.
6. ENCUMBRANCE OF BUDGETED FUNDS	3	2	6100.	200.	12000.	5900.
7. PRODUCING PAYMENTS TO VENDORS OR SUPPLIERS	0	0	0.	0.	0.	0.
8. PRODUCING LISTS OF NEW ACQUISITIONS	2	2	26.	12.	40.	14.
9. PERIODIC STATISTICS ON ACQUISITIONS	1	1	12.	12.	12.	0.
10. OTHER ACQUISITION PRODUCTS	3	3	44344.	532.	99999.	41462.
CATALOGING						
11. VERIFICATION THAT ITEM IS NOT CATALOGED	1	1	50000.	50000.	50000.	0.
12. SEARCHING FOR CATALOGING DATA	5	3	34800.	19400.	50000.	12493.
13. PRODUCING CATALOGING COPY	6	4	20725.	13000.	31000.	7585.
14. PRODUCTION OF CATALOG CARDS	5	4	38650.	11400.	99999.	35745.
15. PRODUCTION OF BOOK CATALOG	0	0	0.	0.	0.	0.
16. PRODUCTION OF MICROFORM CATALOG	0	0	0.	0.	0.	0.
17. PRODUCTION OF SHELF PREPARATION MATERIALS	1	1	99999.	99999.	99999.	0.
18. CATALOG AUTHORITY CONTROL	2	1	3000.	3000.	3000.	0.
19. PRODUCING SPECIALIZED BIBLIOGRAPHIES	1	1	150.	150.	150.	0.
20. PRODUCING CATALOGING VOLUME STATISTICS	3	3	8341.	12.	25000.	11779.
21. PRODUCING CATALOGING COST STATISTICS	0	0	0.	0.	0.	0.
22. OTHER CATALOGING PRODUCTS	4	2	6000.	6000.	6000.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC   STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
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9 LIBRARIES USING OUTSIDE SUPPORT
0 LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	NUMBER OF LIBRARIES INDICATING AVAILABLE TASK DATA	AVERAGE	ANNUAL VOLUME LOW	HIGH	STD DEV
INTER - LIBRARY LOAN						
23. VERIFICATION OF BIBLIOGRAPHIC INFORMATION	3	2	1525.	1200.	1850.	325.
24. LOCATING HOLDING LIBRARIES	4	2	689.	317.	1061.	372.
25. COMMUNICATING ILL REQUESTS TO LIBRARIES	1	1	239.	239.	239.	0.
26. MONITORING STATUS OF ILL REQUESTS	1	1	31.	31.	31.	0.
27. PAYING FOR ILL SERVICES	2	1	183.	183.	183.	0.
28. CHECKING AVAILABILITY OF TITLES IN YOUR LIBRARY	0	0	0.	0.	0.	0.
29. MONITORING THE STATUS OF LOANS	0	0	0.	0.	0.	0.
30. BILLING FOR ILL SERVICES	0	0	0.	0.	0.	0.
31. PERIODIC ILL STATISTICS	1	1	12.	12.	12.	0.
32. OTHER ILL PRODUCTS (SPECIFY)	2	2	2461.	455.	4467.	2006.
SERIALS						
33. CLAIMING OF LATE PERIODICAL ISSUES	1	1	12000.	12000.	12000.	0.
34. CANCELLING OF PERIODICAL SUBSCRIPTIONS	0	0	0.	0.	0.	0.
35. RENEWAL OF PERIODICAL SUBSCRIPTIONS	1	0	0.	0.	0.	0.
36. CONTROLLING OF PERIODICAL BINDING OPERATIONS	0	0	0.	0.	0.	0.
37. SERIALS CHECK-IN OF ISSUES	3	2	88600.	77200.	99999.	11400.
38. PAYING FOR EXISTING PERIODICAL SUBSCRIPTIONS	2	1	20000.	20000.	20000.	0.
39. OTHER SERIALS-ORIENTED PRODUCTS	7	2	18.	9.	26.	9.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC   STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
            10 LIBRARIES INCLUDED
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             9 LIBRARIES USING OUTSIDE SUPPORT
             0 LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF USING OUTSIDE SUPPORT FOR THIS TASK	LIBRARIES INDICATING AVAILABLE TASK DATA	AVERAGE	ANNUAL LOW	VOLUME HIGH	STD DEV
CIRCULATION						
40. MAINTAINING RECORDS OF USERS BORROWING MATERIALS	3	2	30963.	11925.	50000.	19038.
41. IDENTIFICATION OF CIRCULATING MATERIALS	2	1	99999.	99999.	99999.	0.
42. PLACING HOLDS ON CIRCULATING MATERIALS FOR USERS	1	1	4977.	4977.	4977.	0.
43. NOTIFYING USERS OF THE STATUS OF THEIR HOLDS	0	0	0.	0.	0.	0.
44. NOTIFYING USERS OF OVERDUE MATERIALS	2	1	12295.	12295.	12295.	0.
45. COMPUTING FINES FOR OVERDUE MATERIALS	1	1	36881.	36881.	36881.	0.
46. BILLING USERS FOR OVERDUE MATERIALS	1	1	12294.	12294.	12294.	0.
47. PRODUCING PERIODIC CIRCULATION VOLUME STATISTICS	2	1	276.	276.	276.	0.
48. PRODUCING CIRCULATION COST STATISTICS	0	0	0.	0.	0.	0.
49. OTHER CIRCULATION PRODUCTS	4	3	2527.	40.	6000.	2531.
REFERENCE						
50. DATA BASE SEARCHES UPON REQUEST	6	5	2397.	33.	7400.	2651.
51. PERIODIC, ON-GOING SEARCHES	5	4	944.	33.	2168.	921.
52. PRODUCING PRINTED CITATIONS	6	4	51538.	33.	99999.	48509.
53. BILLING FOR DATA BASE SERVICES	3	2	197.	33.	360.	164.
54. PRODUCTION OF USE STATISTICS	2	2	19.	4.	33.	15.
55. PRODUCTION OF COST STATISTICS	1	1	33.	33.	33.	0.
56. OTHER REFERENCE PRODUCTS (SPECIFY)	2	1	99.	99.	99.	0.
OTHER LIBRARY FUNCTION						
57. OTHER FUNCTIONS, TASKS, OR PRODUCTS	1	1	35000.	35000.	35000.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
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DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	NUMBER OF LIBRARIES INDICATING AVAILABLE TASK DATA	ANNUAL COST,$ AVERAGE	LOW	HIGH	STD DEV
ACQUISITIONS						
1. SEARCHING FOR NEW TITLES	3	2	6954.	3908.	10000.	3046.
2. CHECKING THAT TITLES ARE NOT IN LIBRARY	0	0	0.	0.	0.	0.
3. CHECKING THAT TITLES ARE NOT BACK-ORDERED	1	1	300.	300.	300.	0.
4. PRODUCING ORDERS FOR MATERIALS	4	1	8000.	8000.	8000.	0.
5. PRODUCING CLAIM/CANCEL NOTICES	2	0	0.	0.	0.	0.
6. ENCUMBRANCE OF BUDGETED FUNDS	3	0	0.	0.	0.	0.
7. PRODUCING PAYMENTS TO VENDORS OR SUPPLIERS	0	0	0.	0.	0.	0.
8. PRODUCING LISTS OF NEW ACQUISITIONS	2	1	5000.	5000.	5000.	0.
9. PERIODIC STATISTICS ON ACQUISITIONS	1	0	0.	0.	0.	0.
10. OTHER ACQUISITION PRODUCTS	3	2	9808.	7615.	12000.	2193.
CATALOGING						
11. VERIFICATION THAT ITEM IS NOT CATALOGED	1	0	0.	0.	0.	0.
12. SEARCHING FOR CATALOGING DATA	5	0	0.	0.	0.	0.
13. PRODUCING CATALOGING COPY	6	1	35740.	35740.	35740.	0.
14. PRODUCTION OF CATALOG CARDS	5	2	27550.	5100.	50000.	22450.
15. PRODUCTION OF BOOK CATALOG	0	0	0.	0.	0.	0.
16. PRODUCTION OF MICROFORM CATALOG	0	0	0.	0.	0.	0.
17. PRODUCTION OF SHELF PREPARATION MATERIALS	1	0	0.	0.	0.	0.
18. CATALOG AUTHORITY CONTROL	2	0	0.	0.	0.	0.
19. PRODUCING SPECIALIZED BIBLIOGRAPHIES	1	1	3000.	3000.	3000.	0.
20. PRODUCING CATALOGING VOLUME STATISTICS	3	0	0.	0.	0.	0.
21. PRODUCING CATALOGING COST STATISTICS	0	0	0.	0.	0.	0.
22. OTHER CATALOGING PRODUCTS	4	2	10125.	250.	20000.	9875.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
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 9 LIBRARIES USING OUTSIDE SUPPORT
 0 LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	LIBRARIES INDICATING AVAILABLE TASK DATA	AVERAGE	LOW	ANNUAL COST, $ HIGH	STD DEV
INTER - LIBRARY LOAN						
23. VERIFICATION OF BIBLIOGRAPHIC INFORMATION	3	0	0.	0.	0.	0.
24. LOCATING HOLDING LIBRARIES	4	1	2500.	2500.	2500.	0.
25. COMMUNICATING ILL REQUESTS TO LIBRARIES	1	0	0.	0.	0.	0.
26. MONITORING STATUS OF ILL REQUESTS	1	0	0.	0.	0.	0.
27. PAYING FOR ILL SERVICES	2	0	0.	0.	0.	0.
28. CHECKING AVAILABILITY OF TITLES IN YOUR LIBRARY	0	0	0.	0.	0.	0.
29. MONITORING THE STATUS OF LOANS	0	0	0.	0.	0.	0.
30. BILLING FOR ILL SERVICES	0	0	0.	0.	0.	0.
31. PERIODIC ILL STATISTICS	1	1	1800.	1800.	1800.	0.
32. OTHER ILL PRODUCTS (SPECIFY)	2	2	10457.	8191.	12722.	2266.
SERIALS						
33. CLAIMING OF LATE PERIODICAL ISSUES	1	0	0.	0.	0.	0.
34. CANCELLING OF PERIODICAL SUBSCRIPTIONS	0	0	0.	0.	0.	0.
35. RENEWAL OF PERIODICAL SUBSCRIPTIONS	1	0	0.	0.	0.	0.
36. CONTROLLING OF PERIODICAL BINDING OPERATIONS	0	0	0.	0.	0.	0.
37. SERIALS CHECK-IN OF ISSUES	3	1	18000.	18000.	18000.	0.
38. PAYING FOR EXISTING PERIODICAL SUBSCRIPTIONS	2	0	0.	0.	0.	0.
39. OTHER SERIALS-ORIENTED PRODUCTS	7	2	23000.	16000.	30000.	7000.

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0LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	LIBRARIES INDICATING AVAILABLE TASK DATA	AVERAGE	ANNUAL COST,$ LOW	HIGH	STD DEV
CIRCULATION						
40. MAINTAINING RECORDS OF USERS BORROWING MATERIALS	3	1	7597.	7597.	7597.	0.
41. IDENTIFICATION OF CIRCULATING MATERIALS	2	1	7597.	7597.	7597.	0.
42. PLACING HOLDS ON CIRCULATING MATERIALS FOR USERS	1	1	7597.	7597.	7597.	0.
43. NOTIFYING USERS OF THE STATUS OF THEIR HOLDS	0	0	0.	0.	0.	0.
44. NOTIFYING USERS OF OVERDUE MATERIALS	2	1	7597.	7597.	7597.	0.
45. COMPUTING FINES FOR OVERDUE MATERIALS	1	1	7597.	7597.	7597.	0.
46. BILLING USERS FOR OVERDUE MATERIALS	1	1	7597.	7597.	7597.	0.
47. PRODUCING PERIODIC CIRCULATION VOLUME STATISTICS	2	1	7597.	7597.	7597.	0.
48. PRODUCING CIRCULATION COST STATISTICS	0	0	0.	0.	0.	0.
49. OTHER CIRCULATION PRODUCTS	4	3	31884.	360.	72500.	30145.
REFERENCE						
50. DATA BASE SEARCHES UPON REQUEST	6	3	11978.	4220.	25000.	9264.
51. PERIODIC, ON-GOING SEARCHES	5	2	4170.	2000.	6340.	2170.
52. PRODUCING PRINTED CITATIONS	6	1	1139.	1139.	1139.	0.
53. BILLING FOR DATA BASE SERVICES	3	1	282.	282.	282.	0.
54. PRODUCTION OF USE STATISTICS	2	1	72.	72.	72.	0.
55. PRODUCTION OF COST STATISTICS	1	0	0.	0.	0.	0.
56. OTHER REFERENCE PRODUCTS (SPECIFY)	2	0	0.	0.	0.	0.
OTHER LIBRARY FUNCTION						
57. OTHER FUNCTIONS, TASKS OR PRODUCTS	1	1	6000.	6000.	6000.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
        10 LIBRARIES INCLUDED
         1 LIBRARIES USING NO OUTSIDE SUPPORT
         9 LIBRARIES USING OUTSIDE SUPPORT
         0 LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	NUMBER OF LIBRARIES INDICATING AVAILABLE TASK DATA	ANNUAL COST PER VOLUME,$			
			AVERAGE	LOW	HIGH	STD DEV
ACQUISITIONS						
1. SEARCHING FOR NEW TITLES	3	1	0.24	0.24	0.24	0.0
2. CHECKING THAT TITLES ARE NOT IN LIBRARY	0	0	0.0	0.0	0.0	0.0
3. CHECKING THAT TITLES ARE NOT BACK-ORDERED	1	0	0.0	0.0	0.0	0.0
4. PRODUCING ORDERS FOR MATERIALS	4	1	0.11	0.11	0.11	0.0
5. PRODUCING CLAIM/CANCEL NOTICES	2	0	0.0	0.0	0.0	0.0
6. ENCUMBRANCE OF BUDGETED FUNDS	3	0	0.0	0.0	0.0	0.0
7. PRODUCING PAYMENTS TO VENDORS OR SUPPLIERS	0	0	0.0	0.0	0.0	0.0
8. PRODUCING LISTS OF NEW ACQUISITIONS	2	1	125.00	125.00	125.00	0.0
9. PERIODIC STATISTICS ON ACQUISITIONS	1	0	0.0	0.0	0.0	0.0
10. OTHER ACQUISITION PRODUCTS	3	2	0.18	0.12	0.23	0.06
CATALOGING						
11. VERIFICATION THAT ITEM IS NOT CATALOGED	1	0	0.0	0.0	0.0	0.0
12. SEARCHING FOR CATALOGING DATA	5	0	0.0	0.0	0.0	0.0
13. PRODUCING CATALOGING COPY	6	0	0.0	0.0	0.0	0.0
14. PRODUCTION OF CATALOG CARDS	5	1	2.00	2.00	2.00	0.0
15. PRODUCTION OF BOOK CATALOG	0	0	0.0	0.0	0.0	0.0
16. PRODUCTION OF MICROFORM CATALOG	0	0	0.0	0.0	0.0	0.0
17. PRODUCTION OF SHELF PREPARATION MATERIALS	1	0	0.0	0.0	0.0	0.0
18. CATALOG AUTHORITY CONTROL	2	0	0.0	0.0	0.0	0.0
19. PRODUCING SPECIALIZED BIBLIOGRAPHIES	1	1	20.00	20.00	20.00	0.0
20. PRODUCING CATALOGING VOLUME STATISTICS	3	0	0.0	0.0	0.0	0.0
21. PRODUCING CATALOGING COST STATISTICS	0	0	0.0	0.0	0.0	0.0
22. OTHER CATALOGING PRODUCTS	4	1	3.33	3.33	3.33	0.0

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
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  9 LIBRARIES USING OUTSIDE SUPPORT
  0 LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	NUMBER OF LIBRARIES INDICATING AVAILABLE TASK DATA	AVERAGE	ANNUAL COST PER VOLUME,$ LOW	HIGH	STD DEV
INTER - LIBRARY LOAN						
23. VERIFICATION OF BIBLIOGRAPHIC INFORMATION	3	0	0.0	0.0	0.0	0.0
24. LOCATING HOLDING LIBRARIES	4	1	2.36	2.36	2.36	0.0
25. COMMUNICATING ILL REQUESTS TO LIBRARIES	1	0	0.0	0.0	0.0	0.0
26. MONITORING STATUS OF ILL REQUESTS	1	0	0.0	0.0	0.0	0.0
27. PAYING FOR ILL SERVICES	2	0	0.0	0.0	0.0	0.0
28. CHECKING AVAILABILITY OF TITLES IN YOUR LIBRARY	0	0	0.0	0.0	0.0	0.0
29. MONITORING THE STATUS OF LOANS	0	0	0.0	0.0	0.0	0.0
30. BILLING FOR ILL SERVICES	0	0	0.0	0.0	0.0	0.0
31. PERIODIC ILL STATISTICS	1	1	150.00	150.00	150.00	0.0
32. OTHER ILL PRODUCTS (SPECIFY)	2	2	10.43	2.85	18.00	7.58
SERIALS						
33. CLAIMING OF LATE PERIODICAL ISSUES	1	0	0.0	0.0	0.0	0.0
34. CANCELLING OF PERIODICAL SUBSCRIPTIONS	0	0	0.0	0.0	0.0	0.0
35. RENEWAL OF PERIODICAL SUBSCRIPTIONS	1	0	0.0	0.0	0.0	0.0
36. CONTROLLING OF PERIODICAL BINDING OPERATIONS	0	0	0.0	0.0	0.0	0.0
37. SERIALS CHECK-IN OF ISSUES	3	1	0.23	0.23	0.23	0.0
38. PAYING FOR EXISTING PERIODICAL SUBSCRIPTIONS	2	0	0.0	0.0	0.0	0.0
39. OTHER SERIALS-ORIENTED PRODUCTS	7	0	0.0	0.0	0.0	0.0

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9 LIBRARIES USING OUTSIDE SUPPORT
0 LIBRARIES NOT RESPONDING

DEPT / LIBRARY TASK DESCRIPTION	NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK	LIBRARIES INDICATING AVAILABLE TASK DATA	ANNUAL COST PER VOLUME,$			
			AVERAGE	LOW	HIGH	STD DEV
CIRCULATION						
40. MAINTAINING RECORDS OF USERS BORROWING MATERIALS	3	1	0.64	0.64	0.64	0.0
41. IDENTIFICATION OF CIRCULATING MATERIALS	2	1	0.09	0.08	0.08	0.0
42. PLACING HOLDS ON CIRCULATING MATERIALS FOR USERS	1	1	1.53	1.53	1.53	0.0
43. NOTIFYING USERS OF THE STATUS OF THEIR HOLDS	0	0	0.0	0.0	0.0	0.0
44. NOTIFYING USERS OF OVERDUE MATERIALS	2	1	0.62	0.62	0.62	0.0
45. COMPUTING FINES FOR OVERDUE MATERIALS	1	1	0.21	0.21	0.21	0.0
46. BILLING USERS FOR OVERDUE MATERIALS	1	1	0.62	0.62	0.62	0.0
47. PRODUCING PERIODIC CIRCULATION VOLUME STATISTICS	2	1	27.53	27.53	27.53	0.0
48. PRODUCING CIRCULATION COST STATISTICS	0	0	0.0	0.0	0.0	0.0
49. OTHER CIRCULATION PRODUCTS	4	2	284.92	0.06	569.77	284.86
REFERENCE						
50. DATA BASE SEARCHES UPON REQUEST	6	3	7.39	4.85	9.51	1.93
51. PERIODIC, ON-GOING SEARCHES	5	2	14.80	2.92	26.67	11.87
52. PRODUCING PRINTED CITATIONS	6	1	0.01	0.01	0.01	0.0
53. BILLING FOR DATA BASE SERVICES	3	1	0.78	0.78	0.78	0.0
54. PRODUCTION OF USE STATISTICS	2	1	18.00	18.00	18.00	0.0
55. PRODUCTION OF COST STATISTICS	1	0	0.0	0.0	0.0	0.0
56. OTHER REFERENCE PRODUCTS (SPECIFY)	2	0	0.0	0.0	0.0	0.0
OTHER LIBRARY FUNCTION						
57. OTHER FUNCTIONS, TASKS, OR PRODUCTS	1	1	0.17	0.17	0.17	0.0

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE IV: UNIQUE COMPUTER SUPPORT
10 LIBRARIES INCLUDED

SYSTEM FUNCTION	NUMBER OF LIBRARIES REPORTING	COST OF DEVELOPMENT				NUMBER OF LIBRARIES REPORTING	COST OF ANNUAL MAINTENANCE			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
CIRCULATION	2	22653.	500.	44805.	22152.	4	45609.	500.	100000.	41907.
ACQUISITIONS	2	8000.	1000.	15000.	7000.	4	40021.	7615.	131000.	52545.
INTER - LIBRARY LOAN	1	1000.	1000.	1000.	0.	1	500.	500.	500.	0.
SERIALS	2	12000.	12000.	12000.	0.	4	30765.	3060.	87000.	33021.
INVENTRY CONTROL	0	0.	0.	0.	0.	1	6000.	6000.	6000.	0.
CATALOGING	0	0.	0.	0.	0.	0	0.	0.	0.	0.
PROCESSING	0	0.	0.	0.	0.	0	0.	0.	0.	0.
ACCOUNTING	0	0.	0.	0.	0.	2	12490.	980.	24000.	11510.

A: SURVEY OF 100 LIBRARIES   LARGE   ACADEMIC STRATUM

TABLE V: EQUIPMENT AND COMMUNICATIONS COSTS
         10 LIBRARIES INCLUDED

EQUIPMENT CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	LOW	ANNUAL COSTS HIGH	STD DEV
1. COPYING	9	51944.	5000.	180846.	63056.
2. TELEX	0	0.	0.	0.	0.
3. TELETYPE, TWX	7	2209.	850.	3000.	651.
4. DATATEL	1	1086.	1086.	1086.	0.
5. OTHER TELETYPE SERVICE	0	0.	0.	0.	0.
6. FAX	0	0.	0.	0.	0.
7. DATAPHONE	1	1200.	1200.	1200.	0.
8. CRT	4	10368.	240.	37560.	15729.
9. LINE CHARGES TO COMPUTER	1	500.	500.	500.	0.
10. TELEPHONE OTHER THAN ABOVE	9	10656.	615.	24572.	7287.
11. OTHER COMMUNICATIONS COSTS	2	1198.	185.	2211.	1013.
12. TOTAL	10	62553.	14464.	194646.	60725.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VI: BUDGET AND EXPENDITURE PATTERNS, 10 LIBRARIES INCLUDED

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	TOTAL LIBRARY LOW	HIGH	STD DEV	*NUMBER OF LIBRARIES REPORTING	INCREASE OVER LAST YEAR'S EXPENDITURES AVERAGE	LOW	HIGH	STD DEV
CAPITAL EXPENDITURE	7	2550157.	8000.	10720287.	4117277.	7	2920789.	-69649.	10665992.	4306710.
TOTAL MATERIALS	10	1224067.	368000.	1855087.	417625.	10	157172.	65261.	364428.	100233.
BOOKSTOCK	5	732037.	515902.	1031600.	195278.	5	86519.	-42434.	304428.	116859.
PERIODICALS	6	583196.	360000.	1053437.	233698.	6	116033.	60000.	188581.	50611.
MICROFORM	1	29384.	29384.	29384.	0.	1	-31856.	-31856.	-31856.	0.
GOVERNMENT DOCUMENTS	4	11420.	6275.	20000.	5286.	4	3896.	-575.	7263.	3294.
AUDIO - VISUAL	4	15758.	10000.	31000.	8825.	4	-4164.	-8951.	1121.	3594.
OTHER MATERIALS	1	1400.	1400.	1400.	0.	1	825.	825.	825.	0.
TOTAL OPERATING	10	2991049.	1369353.	7133462.	1718513.	10	245106.	83577.	504626.	127467.
SALARIES AND FRINGE BENEFITS	10	2740504.	1240897.	6648692.	1583950.	10	242437.	71798.	529742.	136419.
AUTOMATED SYSTEMS	8	53761.	7540.	99077.	28343.	8	28818.	-1039.	56500.	18985.
OTHER SUPPORT SERVICES	6	91597.	6700.	365252.	124873.	5	-17488.	-60355.	4079.	23521.
EQUIPMENT RENTAL	10	14070.	600.	30000.	9303.	10	457.	-7547.	7676.	4556.
COMMUNICATIONS	9	16138.	7536.	33200.	7958.	9	1728.	-374.	7400.	2410.
SUPPLIES	10	39722.	16147.	73485.	18136.	10	-38629.	-346447.	8373.	109014.
OTHER OPERATING	7	120376.	3235.	269962.	108224.	4	-20639.	-49144.	4436.	23575.
TOTAL LIBRARY BUDGET	10	6000225.	2153800.	14062340.	3840516.	10	2348115.	136649.	10867988.	3722183.

2 LIBRARIES INDICATING NEW BUILDING INCLUDED IN CAPITAL BUDGET

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VIA: BUDGET AND EXPENDITURE PATTERNS: DEPARTMENTAL ALLOCATIONS
10 LIBRARIES INCLUDED

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	PERCENT ALLOCATED TO: ADMINISTRATION				NUMBER OF LIBRARIES REPORTING	PERCENT ALLOCATED TO: ACQUISITIONS			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
TOTAL OPERATING	10	9.02%	3.31%	19.18%	4.07	9	8.92%	3.26%	14.47%	2.90
SALARIES AND FRINGE BENEFITS	10	9.17%	3.55%	18.48%	3.71	9	9.51%	3.50%	15.32%	3.07
AUTOMATED SYSTEMS	1	15.26%	15.26%	15.26%	0.0	1	58.21%	58.21%	58.21%	0.0
OTHER SUPPORT SERVICES	4	12.16%	3.33%	31.55%	11.53	3	10.08%	3.52%	18.97%	6.52
EQUIPMENT RENTAL	3	59.91%	9.98%	92.00%	35.78	0	0.0 %	0.0 %	0.0 %	0.0
COMMUNICATIONS	4	35.98%	11.00%	100.00%	37.04	3	6.83%	3.09%	9.34%	2.69
SUPPLIES	4	3.87%	2.43%	5.66%	1.19	5	8.39%	3.00%	15.10%	4.03
OTHER OPERATING	1	6.18%	6.18%	6.18%	0.0	1	14.53%	14.53%	14.53%	0.0
TOTAL LIBRARY BUDGET	10	5.33%	1.04%	12.19%	3.16	9	5.08%	0.94%	7.83%	2.15

A: SURVEY OF 100 LIBRARIES. LARGE   ACADEMIC STRATUM

TABLE VIA: BUDGET AND EXPENDITURE PATTERNS: DEPARTMENTAL ALLOCATIONS
10 LIBRARIES INCLUDED

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	PERCENT ALLOCATED TO: CATALOGING AVERAGE	LOW	HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	PERCENT ALLOCATED TO: SERIALS AVERAGE	LOW	HIGH	STD DEV
TOTAL OPERATING	9	15.68%	7.97%	19.98%	4.29	9	6.38%	2.89%	8.89%	1.75
SALARIES AND FRINGE BENEFITS	9	16.24%	8.34%	22.44%	4.53	9	6.75%	3.10%	9.45%	1.83
AUTOMATED SYSTEMS	3	51.35%	11.58%	86.59%	30.79	2	34.01%	31.20%	36.82%	2.81
OTHER SUPPORT SERVICES	3	17.93%	3.52%	28.21%	10.49	3	3.44%	1.03%	5.77%	1.94
EQUIPMENT RENTAL	3	43.48%	8.20%	100.00%	40.37	0	0.0 %	0.0 %	0.0 %	0.0
COMMUNICATIONS	3	5.98%	1.86%	9.69%	3.21	3	3.93%	2.00%	5.46%	1.44
SUPPLIES	5	16.78%	5.66%	32.14%	9.99	5	5.76%	1.13%	15.10%	5.15
OTHER OPERATING	1	29.37%	29.37%	29.37%	0.0	1	4.95%	4.95%	4.95%	0.0
TOTAL LIBRARY BUDGET	9	8.99%	2.45%	14.80%	4.19	9	3.83%	0.86%	6.58%	2.01

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VIA: BUDGET AND EXPENDITURE PATTERNS: DEPARTMENTAL ALLOCATIONS
10 LIBRARIES INCLUDED

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	PERCENT ALLOCATED TO: INTER - LIBRARY LOAN				NUMBER OF LIBRARIES REPORTING	PERCENT ALLOCATED TO: MATERIALS FINISHING			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
TOTAL OPERATING	9	1.98%	1.14%	3.25%	0.62	9	4.22%	1.10%	9.17%	3.07
SALARIES AND FRINGE BENEFITS	9	2.03%	1.23%	3.06%	0.54	9	3.76%	1.14%	9.60%	2.98
AUTOMATED SYSTEMS	1	4.14%	4.14%	4.14%	0.0	0	0.0 %	0.0 %	0.0 %	0.0
OTHER SUPPORT SERVICES	3	5.15%	1.06%	10.26%	3.82	3	25.42%	1.18%	68.45%	30.51
EQUIPMENT RENTAL	1	10.60%	10.60%	10.60%	0.0	1	8.00%	8.00%	8.00%	0.0
COMMUNICATIONS	3	10.10%	1.30%	18.56%	7.05	3	2.20%	0.97%	4.33%	1.51
SUPPLIES	4	2.57%	1.26%	5.66%	1.81	5	14.53%	3.64%	21.07%	6.93
OTHER OPERATING	2	2.93%	1.23%	4.64%	1.70	1	3.25%	3.25%	3.25%	0.0
TOTAL LIBRARY BUDGET	9	1.23%	0.17%	2.06%	0.61	9	2.84%	0.26%	7.73%	2.57

A:SURVEY OF 100 LIBRARIES.   LARGE   ACADEMIC STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY
  10 LIBRARIES INCLUDED
  A: SERVICES PROVIDED BY REGIONAL LIBRARIES

TYPE OF SERVICE	NUMBER IN THIS STRATUM PROVIDING REGIONAL SERVICE	NUMBER IN THIS STRATUM PROVIDING THIS SERVICE	PERCENT PROVIDING THIS SERVICE
ACQUISITIONS			
1. MAINTAIN STANDING ORDERS	7	0	0.0%
2. PAYMENT PROCESSING	7	0	0.0%
3. COLLECTION DEVELOPMENT	7	0	0.0%
4. CLAIM BACKORDERED ITEMS	7	0	0.0%
5. RETURNS	7	0	0.0%
6. CANCELLATIONS	7	0	0.0%
7. OTHER	7	0	0.0%
CATALOGING			
8. PRODUCE CARD SETS	7	1	14.3%
9. PHYSICAL PROCESSING	7	0	0.0%
10. PROVIDE CATALOGING COPY	7	2	28.6%
11. PRODUCE CATALOGS	7	1	14.3%
12. OTHER	7	0	0.0%
INTER - LIBRARY LOAN			
13. PROVIDE LOCATIONS	7	3	42.9%
14. VERIFICATION	7	4	57.1%
15. ACT AS SWITCHING CENTER	7	4	57.1%
16. OTHER	7	2	28.6%
REFERENCE			
17. DATA BASE SEARCHES	7	3	42.9%
18. REFERRAL SERVICES	7	1	14.3%
19. OTHER	7	2	28.6%
OTHER			
20. MAINTAIN A UNION CATALOG	7	1	14.3%
21. OTHER REGIONAL SERVICES	7	0	0.0%
NONE			
22. NO REGIONAL SERVICES	7	0	0.0%

A:SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY
  10 LIBRARIES INCLUDED
  B: TYPES OF LIBRARIES SUPPORTED

| TYPE OF LIBRARY | NUMBER OF LIBRARIES REPORTING | AVERAGE | NUMBER OF LIBRARIES SUPPORTED | | STD DEV |
			LOW	HIGH	
PUBLIC	3	48.	13.	65.	24.51
ACADEMIC	4	9.	2.	12.	4.09
SCHOOL	2	99.	99.	99.	0.0
SPECIAL	2	68.	68.	68.	0.0
TOTAL	5	102.	2.	244.	115.67

◦◦99. INDICATES 99 OR MORE LIBRARIES SUPPORTED

A:SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY
10 LIBRARIES INCLUDED
C: REGIONAL INTERLIBRARY LOAN

REQUESTS	NUMBER OF LIBRARIES REPORTING	AVERAGE	VOLUME DURING THE LAST REPORTING YEAR		STD DEV
			LOW	HIGH	
TOTAL REQUESTS	3	18472.	2913.	44850.	18752.
FILLED REQUESTS	3	14132.	961.	37226.	16383.
FILL RATE	3	57.%	33.%	83.%	20.46
% FILLED FROM LIBRARY	3	57.%	33.%	82.%	20.0
% FILLED FROM ANOTHER LIBRARY	1	1.%	1.%	1.%	0.0
% FORWARDED TO STATE LIBRARY	1	8.%	8.%	8.%	0.0
% FORWARDED TO LIBRARY OUTSIDE REGION	2	12.%	10.%	13.%	1.5
% FORWARDED TO A BIBLIOGRAPHIC CENTER	1	67.%	67.%	67.%	0.0
% RETURNED TO REQUESTER WITH LOCATION INFORMATION	2	11.%	2.%	20.%	9.0
% RETURNED TO REQUESTER UNFILLED	2	2.%	1.%	3.%	1.0
% UNFILLED	2	16.%	5.%	27.%	11.0

A:SURVEY OF 100 LIBRARIES.   LARGE   ACADEMIC   STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY
        10 LIBRARIES INCLUDED
        D: REGIONAL CATALOG MAINTENANCE

TYPE OF HOLDINGS	NUMBER OF LIBRARIES PROVIDING CATALOG	AVERAGE	CATALOG SIZE,ETC. LOW	HIGH	STD DEV
MONOGRAPHS	1				
SERIALS	1				
OTHER	0				
COMBINED	1				
TITLES	1	21362.00	21362.00	21362.00	0.0
TITLES ADDED	1	4272.00	4272.00	4272.00	0.0
LOCATIONS	1	17.00	17.00	17.00	0.0
LOCATIONS PER TITLE	1	17.00	17.00	17.00	0.0
YEARS IN EXISTENCE	1	6.00	6.00	6.00	0.0

A:SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY
    10 LIBRARIES INCLUDED
    E: REIMBURSEMENT
      5 LIBRARIES RECEIVING REIMBURSEMENT

CHARACTERISTICS OF REIMBURSEMENTS	NUMBER OF LIBRARIES RECEIVING	AVERAGE	AMOUNT LOW	HIGH	STD DEV
GENERAL					
SALARIES FOR HQS STAFF	5	19650.00	2400.00	78871.00	29679.43
ANNUAL SUPPLY SUPPLEMENT	3	2902.67	908.00	6600.00	2617.13
ANNUAL EQUIPMENT SUPPLMT	1	50.00	50.00	50.00	0.0
ANNUAL STIPEND	0	0.0	0.0	0.0	0.0
CATALOGING					
PER VOLUME PROCESSED	0	0.0	0.0	0.0	0.0
PER CARD SET	1	0.85	0.85	0.85	0.0
PER ENTRY IN CATALOG	0	0.0	0.0	0.0	0.0
ACQUISITIONS					
PER VOLUME ORDERED	0	0.0	0.0	0.0	0.0
INTER - LIBRARY LOAN					
PER FILLED REQUEST	2	0.10	0.10	0.10	0.0
PER UNFILLED REQUEST	1	0.50	0.50	0.50	0.0
PER REQUEST FOR LOC INFO	0	0.0	0.0	0.0	0.0
OTHER	4	6019.75	53.00	20225.00	8260.59

SOURCE OF REIMBURSEMENT	NUMBER OF LIBRARIES RECEIVING	AVERAGE	PERCENTAGE LOW	HIGH	STD DEV
STATE LIBRARIES	3	98.00%	94.00%	100.00%	2.83
PARTICIPATING LIBRARIES	2	75.00%	50.00%	100.00%	25.00
OTHER	4	63.50%	6.00%	99.00%	38.76

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VIII: ACQUISITIONS DEPARTMENT
10 LIBRARIES INCLUDED
A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	DEPARTMENT AVERAGE	DEPARTMENT LOW	HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	INCREASE OVER LAST YEAR'S EXPENDITURES AVERAGE	LOW	HIGH	STD DEV
TOTAL OPERATING	9	246225.	129751.	381238.	90577.	9	15679.	-47163.	55408.	27783.
SALARIES AND FRINGE BENEFITS	9	239906.	173551.	381238.	86529.	9	13943.	-59025.	55408.	31191.
AUTOMATED SYSTEMS	1	25300.	25300.	25300.	0.	1	13000.	13000.	13000.	0.
OTHER SUPPORT SERVICES	3	3970.	1700.	6509.	1973.	3	223.	161.	275.	47.
EQUIPMENT RENTAL	0	0.	0.	0.	0.	0	0.	0.	0.	0.
COMMUNICATIONS	3	1139.	500.	2077.	678.	3	119.	107.	131.	12.
SUPPLIES	5	3155.	600.	5476.	1616.	5	-25.	-1136.	620.	611.
OTHER OPERATING	1	470.	470.	470.	0.	1	106.	106.	106.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VIII: ACQUISITIONS DEPARTMENT
          10 LIBRARIES INCLUDED
       A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	LAST YEAR'S EXPENDITURES AVERAGE	LOW	HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	AVERAGE	EXPENDITURE PER THROUGHPUT LOW	HIGH	STD DEV
TOTAL OPERATING	9	232288.	97747.	424653.	96408.	9	4.84	2.81	14.11	2.75
SALARIES AND FRINGE BENEFITS	9	227512.	91769.	408015.	93231.	9	4.74	2.80	13.55	2.61
AUTOMATED SYSTEMS	2	6953.	1605.	12300.	5348.	2	0.19	0.04	0.41	0.18
OTHER SUPPORT SERVICES	3	3747.	1468.	6348.	2005.	3	0.10	0.06	0.15	0.04
EQUIPMENT RENTAL	0	0.	0.	0.	0.	0	0.0	0.0	0.0	0.0
COMMUNICATIONS	3	1060.	500.	1946.	634.	3	0.03	0.02	0.05	0.01
SUPPLIES	5	3181.	589.	4856.	1603.	5	0.09	0.01	0.16	0.05
OTHER OPERATING	1	364.	364.	364.	0.	1	0.01	0.01	0.01	0.0

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VIII: ACQUISITIONS DEPARTMENT
10 LIBRARIES INCLUDED
B: STAFFING AND SALARY EXPENDITURES

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	VOLUME THROUGHPUT AVERAGE	VOLUME THROUGHPUT LOW	PER ACQ FTE HIGH	PER ACQ FTE STD DEV	NUMBER OF LIBRARIES REPORTING	ACQ SAL $ EXP PER VOLUME AVERAGE	ACQ SAL $ EXP PER VOLUME LOW	ANNUAL THROUGHPUT HIGH	ANNUAL THROUGHPUT STD DEV
PROFESSIONAL LIBRARIAN	36.60	12130.87	4300.29	52423.00	9308.44	10	1.52	0.33	3.47	0.93
OTHER PROFESSIONAL	1.00	30102.00	30102.00	30102.00	0.0	1	0.49	0.49	0.49	0.0
LIBRARY ASSISTANT	117.75	3770.61	1920.00	14866.66	1939.42	10	2.47	0.54	4.11	0.94
CLERK	28.50	8643.04	2400.00	43047.00	9000.17	7	1.09	0.22	2.74	0.98
STUDENT / PAGE	25.14	16640.09	6297.49	64756.97	15069.68	10	0.30	0.04	0.94	0.27
OTHER	2.00	43823.50	43047.00	44600.00	776.50	2	0.26	0.22	0.30	0.04
STAFF PAID BY OUTSIDE SOURCES	9.85	16632.68	5739.60	60948.00	20085.49	0	0.0	0.0	0.0	0.0
VOLUNTEER	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
TOTAL	220.84	2010.46	857.14	3185.71	794.50	10	5.16	2.65	10.11	2.37

A: SURVFY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VIII: ACQUISITIONS DEPARTMENT
10 LIBRARIES INCLUDED
B: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | FULL TIME EQUIVALENCIES | | | | NUMBER OF LIBRARIES REPORTING | ANNUAL SALARY EXPENDITURES,$ | | | |
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	10	3.66	1.00	7.00	1.68	10	56174.	18220.	104532.	27764.
OTHER PROFESSIONAL	1	1.00	1.00	1.00	0.0	1	14820.	14820.	14820.	0.
LIBRARY ASSISTANT	10	11.77	3.00	22.00	5.91	10	107880.	24228.	214680.	61260.
CLERK	7	4.07	1.00	8.50	2.68	7	29912.	6448.	70500.	21365.
STUDENT / PAGE	9	2.79	0.75	6.00	1.87	10	11309.	1010.	28431.	8640.
OTHER	2	1.00	1.00	1.00	0.0	2	11355.	9822.	12888.	1533.
STAFF PAID BY OUTSIDE SOURCES	3	3.28	1.10	7.50	2.98	0	0.	0.	0.	0.
VOLUNTEER	0	0.0	0.0	0.0	0.0	0	0.	0.	0.	0.

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTED | AVERAGE SALARY PER FTE | | | |
		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	36.60	15348.	10739.	18220.	1703.
OTHER PROFESSIONAL	1.00	14820.	14820.	14820.	0.
LIBRARY ASSISTANT	117.75	9162.	6760.	10407.	1090.
CLERK	28.50	7347.	5421.	9396.	1039.
STUDENT / PAGE	25.14	4458.	1748.	7345.	1675.
OTHER	2.00	11355.	9822.	12888.	1533.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE VIII: ACQUISITIONS DEPARTMENT
           C: ORDERING PATTERNS
           10 LIBRARIES INCLUDED

MATERIAL TYPE AND/OR SOURCE	NUMBER OF LIBRARIES REPORTING	AVERAGE	TOTAL THROUGHPUT LOW	HIGH	STD DEV
MONOGRAPH TITLES	10	37552.	11800.	66185.	15716.
SERIAL TITLES	9	7608.	200.	22392.	7058.
TOTAL TITLES	10	44399.	12000.	76185.	18171.
% STANDING ORDER	10	7.%	1.%	20.%	5.9
% APPROVAL PLAN	10	21.%	5.%	36.%	10.3
% ORDER REQUEST	10	54.%	38.%	66.%	8.1
% GIFT/EXCHANGE	10	15.%	5.%	32.%	8.2
% OTHER	4	6.%	1.%	14.%	4.8
YEAR IMPRINT					
% 1975-76	9	57.%	10.%	85.%	20.1
% 1969-74	9	30.%	4.%	80.%	20.3
% PRE1969	8	7.%	1.%	15.%	4.5
BACKFILE AND RETROSPECTIVE					
% SERIAL BACKFILE SUPPLEMENT	6	51.8%	1.0%	99.0%	47.2
% MONOGRAPH RETROSPECTIVE COLLECTION DEVELOPMENT	6	24.2%	1.0%	50.0%	22.7

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE IX: CATALOGING DEPARTMENT
　　　10 LIBRARIES INCLUDED
　　　A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	DEPARTMENT LOW	HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	INCREASE AVERAGE	OVER LAST LOW	YEAR'S HIGH	EXPENDITURES STD DEV
TOTAL OPERATING	9	513694.	118991.	1291198.	334884.	9	58945.	13656.	101727.	24818.
SALARIES AND FRINGE BENEFITS	9	495528.	114391.	1291198.	341245.	9	48672.	12299.	101727.	31813.
AUTOMATED SYSTEMS	3	31213.	7800.	50000.	17536.	0	0.	0.	0.	0.
OTHER SUPPORT SERVICES	3	8587.	1700.	18562.	7222.	3	-1488.	-3410.	240.	1496.
EQUIPMENT RENTAL	3	2157.	600.	3900.	1354.	3	-1711.	-5153.	563.	2475.
COMMUNICATIONS	3	1125.	300.	2500.	979.	3	105.	40.	170.	65.
SUPPLIES	5	6659.	1790.	17985.	5863.	5	-445.	-1708.	1342.	1032.
OTHER OPERATING	1	950.	950.	950.	0.	1	153.	153.	153.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC   STRATUM

TABLE IX: CATALOGING DEPARTMENT
    10 LIBRARIES INCLUDED
    B: STAFFING AND SALARY EXPENDITURES

TYPE OF EMPLOYEE	NUMBER OF LIBRARIES REPORTING	FULL TIME EQUIVALENCIES AVERAGE	LOW	HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	ANNUAL SALARY EXPENDITURES.$ AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	10	11.09	5.00	17.00	4.28	10	177396.	78447.	290816.	64532.
OTHER PROFESSIONAL	1	0.50	0.50	0.50	0.0	1	3229.	3229.	3229.	0.
LIBRARY ASSISTANT	10	24.21	2.00	75.00	20.61	10	224517.	22656.	726649.	203602.
CLERK	5	7.60	2.00	16.00	4.96	5	40981.	13288.	79006.	23567.
STUDENT / PAGE	9	4.19	1.00	8.00	2.25	9	20052.	4576.	34162.	9491.
OTHER	0	0.0	0.0	0.0	0.0	0	0.	0.	0.	0.
STAFF PAID BY OUTSIDE SOURCES	3	2.86	0.74	7.00	2.93	0	0.	0.	0.	0.
VOLUNTEER	0	0.0	0.0	0.0	0.0	0	0.	0.	0.	0.

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	AVERAGE SALARY PER FTE AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	110.87	16000.	11675.	31533.	4175.
OTHER PROFESSIONAL	0.50	6458.	6458.	6458.	0.
LIBRARY ASSISTANT	242.15	9272.	6590.	11328.	1168.
CLERK	38.00	5392.	4938.	6644.	468.
STUDENT / PAGE	37.73	4783.	3837.	5907.	681.
OTHER	0.0	0.	0.	0.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE IX: CATALOGING DEPARTMENT
   10 LIBRARIES INCLUDED
   A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	LAST YEAR'S EXPENDITURES LOW	HIGH	STD DEV
TOTAL OPERATING	9	461298.	105335.	1189471.	309434.
SALARIES AND FRINGE BENEFITS	9	452264.	100885.	1189471.	310855.
AUTOMATED SYSTEMS	0	0.	0.	0.	0.
OTHER SUPPORT SERVICES	3	10075.	1460.	19856.	7555.
EQUIPMENT RENTAL	3	3869.	1144.	7125.	2471.
COMMUNICATIONS	3	1055.	300.	2330.	907.
SUPPLIES	5	7104.	2690.	16643.	5126.
OTHER OPERATING	1	797.	797.	797.	0.

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	EXPENDITURE PER THROUGHPUT LOW	HIGH	STD DEV
TOTAL OPERATING	9	11.76	6.28	17.74	3.92
SALARIES AND FRINGE BENEFITS	9	11.53	6.12	17.74	4.01
AUTOMATED SYSTEMS	0	0.0	0.0	0.0	0.0
OTHER SUPPORT SERVICES	3	0.35	0.10	0.47	0.14
EQUIPMENT RENTAL	3	0.03	0.03	0.24	0.08
COMMUNICATIONS	3	0.04	0.02	0.06	0.02
SUPPLIES	5	0.19	0.10	0.40	0.11
OTHER OPERATING	1	0.03	0.03	0.03	0.0

A: SURVEY OF 100 LIBRARIES. LARGE   ACADEMIC   STRATUM

TABLE IX: CATALOGING DEPARTMENT
        10 LIBRARIES INCLUDED
    B: STAFFING AND SALARY EXPENDITURES

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	TITLE AVERAGE	PER CAT FTE THROUGHPUT LOW	PER CAT FTE HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	CAT SAL $ EXP PER TITLE AVERAGE	LOW	ANNUAL HIGH	THROUGHPUT STD DEV
PROFESSIONAL LIBRARIAN	110.87	3495.30	2231.81	5087.75	936.42	10	4.90	2.74	7.77	1.66
OTHER PROFESSIONAL	0.50	70378.00	70378.00	70378.00	0.0	1	0.09	0.09	0.09	0.0
LIBRARY ASSISTANT	242.15	1600.34	947.17	14929.66	1672.10	10	5.24	0.56	10.26	3.27
CLERK	38.00	3825.00	2799.31	7351.00	1266.02	5	1.30	0.90	1.76	0.33
STUDENT / PAGE	37.73	9881.30	3658.25	34593.00	6225.38	9	0.54	0.13	1.30	0.36
OTHER	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
STAFF PAID BY OUTSIDE SOURCES	8.59	14196.96	5996.29	60525.67	17889.62	0	0.0	0.0	0.0	0.0
VOLUNTEER	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
TOTAL	437.84	885.08	650.50	1633.56	214.66	10	11.28	5.78	17.65	3.85

TABLE IX: CATALOGING DEPARTMENT,
C: CATALOGING PATTERNS,
10 LIBRARIES INCLUDED

TYPE OF MATERIAL	NUMBER OF LIBRARIES REPORTING	AVERAGE	LOW	HIGH	STD DEV
MONOGRAPH TITLES	10	33070.	13723.	53867.	12163.3
SERIALS TITLES	10	2524.	853.	8600.	2346.9
OTHER TITLES	8	3949.	119.	15248.	5064.4
TOTAL TITLES	10	38752.	14702.	71038.	15808.7
CATALOGING SOURCE					
% LC CAT	10	59.%	3.%	87.%	28.5
% NUC DATA	7	8.%	1.%	20.%	5.5
% CIP DATA	4	1.%	1.%	1.%	0.0
% SECONDARY SOURCE	6	34.%	5.%	79.%	29.7
% ORIG CATALOGING	9	16.%	5.%	30.%	7.4
RELATED DATA					
LAG TIME	10	33.	4.	60.	18.5
BACKLOG	10	43450.	1600.	205000.	60994.2
CARDS/RECORD ENTRY FOR:					
MONOGRAPH TITLES	9	10.	6.	14.	2.4
SERIALS TITLES	8	9.	6.	14.	2.5
OTHER TITLES	6	9.	5.	14.	3.0

PROOF SLIP SUBSCRIPTIONS
9 LIBRARIES RESPONDING
4 AFFIRMATIVE OR 44.4%
5 NEGATIVE
0 OTHER RESPONSE

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
          10 LIBRARIES INCLUDED
       A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	DEPARTMENT LOW	HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	INCREASE OVER LAST YEAR'S EXPENDITURES AVERAGE	LOW	HIGH	STD DEV
TOTAL OPERATING	9	57285.	23419.	135307.	29502.	9	5656.	1224.	10779.	3028.
SALARIES AND FRINGE BENEFITS	9	55012.	23019.	135307.	30279.	9	4969.	1202.	10779.	3005.
AUTOMATED SYSTEMS	1	1800.	1800.	1800.	0.	1	1315.	1315.	1315.	0.
OTHER SUPPORT SERVICES	3	1631.	893.	2000.	522.	3	441.	22.	1000.	411.
EQUIPMENT RENTAL	1	2550.	2550.	2550.	0.	1	350.	350.	350.	0.
COMMUNICATIONS	3	1936.	117.	3000.	1292.	3	496.	-41.	1428.	662.
SUPPLIES	4	763.	400.	1500.	449.	4	88.	22.	160.	49.
OTHER OPERATING	2	1175.	150.	2200.	1025.	2	333.	15.	650.	318.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
    10 LIBRARIES INCLUDED
    A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	LAST YEAR'S EXPENDITURES				NUMBER OF LIBRARIES REPORTING	EXPENDITURE PER THROUGHPUT			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
TOTAL OPERATING	9	52257.	22195.	124528.	27337.	9	2.97	1.71	4.25	0.65
SALARIES AND FRINGE BENEFITS	9	50595.	21817.	124528.	27930.	9	2.89	1.68	4.25	0.64
AUTOMATED SYSTEMS	1	485.	485.	485.	0.	1	0.03	0.03	0.03	0.0
OTHER SUPPORT SERVICES	3	1190.	871.	1700.	364.	3	0.09	0.06	0.11	0.02
EQUIPMENT RENTAL	1	2200.	2200.	2200.	0.	1	0.14	0.14	0.14	0.0
COMMUNICATIONS	3	1440.	158.	2589.	997.	3	0.11	0.01	0.18	0.08
SUPPLIES	4	675.	317.	1340.	406.	4	0.05	0.02	0.12	0.04
OTHER OPERATING	2	843.	135.	1550.	708.	2	0.06	0.01	0.11	0.05

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
            10 LIBRARIES INCLUDED
        B: STAFFING AND SALARY EXPENDITURES

TYPE OF EMPLOYEE	NUMBER OF LIBRARIES REPORTING	FULL TIME EQUIVALENCIES				NUMBER OF LIBRARIES REPORTING	ANNUAL SALARY EXPENDITURES, $			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	8	1.07	0.10	2.00	0.50	8	16655.	1058.	26316.	7359.
OTHER PROFESSIONAL	0	0.0	0.0	0.0	0.0	0	0.	0.	0.	0.
LIBRARY ASSISTANT	10	3.08	1.00	10.00	2.46	10	27755.	6873.	87468.	22015.
CLERK	4	0.77	0.07	1.00	0.40	4	4258.	374.	5654.	2244.
STUDENT / PAGE	7	1.14	0.30	3.00	0.82	8	4818.	655.	11856.	3273.
OTHER	1	0.42	0.42	0.42	0.0	1	4522.	4522.	4522.	0.
STAFF PAID BY OUTSIDE SOURCES	5	1.06	0.50	1.80	0.42	0	0.	0.	0.	0.
VOLUNTEER	0	0.0	0.0	0.0	0.0	0	0.	0.	0.	0.

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	AVERAGE SALARY PER FTE			
		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	8.60	15493.	10580.	17453.	1650.
OTHER PROFESSIONAL	0.0	0.	0.	0.	0.
LIBRARY ASSISTANT	30.85	8997.	6873.	12320.	1403.
CLERK	3.07	5548.	5343.	5654.	95.
STUDENT / PAGE	8.00	4717.	2183.	8568.	1240.
OTHER	0.42	10767.	10767.	10767.	0.

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED
B: STAFFING AND SALARY EXPENDITURES

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	REQUEST PER ILL FTE				NUMBER OF LIBRARIES REPORTING	ILL SAL $ EXP PER REQUEST ANNUAL			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	8.60	16447.20	6663.33	104369.94	13959.57	8	1.10	0.10	2.62	0.71
OTHER PROFESSIONAL	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
LIBRARY ASSISTANT	30.85	5464.47	3479.00	15403.00	2584.27	10	1.60	0.45	2.61	0.72
CLERK	3.07	19385.67	10437.00	295728.56	42259.61	4	0.33	0.02	0.52	0.19
STUDENT / PAGE	8.00	12915.35	5134.33	33316.66	8045.10	8	0.33	0.07	0.77	0.21
OTHER	0.42	49288.08	49288.08	49288.09	0.01	1	0.22	0.22	0.22	0.0
STAFF PAID BY OUTSIDE SOURCES	5.30	12679.23	7500.00	22328.00	4441.05	0	0.0	0.0	0.0	0.0
VOLUNTEER	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
TOTAL	56.24	2997.49	1776.32	3919.47	778.24	10	2.90	1.58	4.18	0.68

A: SURVEY OF 100 LIBRARIES. LARGE   ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
         10 LIBRARIES INCLUDED
   C: VOLUME OF BORROWING REQUESTS

BORROWING REQUESTS	NUMBER OF LIBRARIES REPORTING	AVERAGE	LOW	VOLUME HIGH	STD DEV
TOTAL REQUESTS	10	5431.	2704.	10000.	2348.
NUMBER FILLED	10	4343.	2434.	7377.	1413.
FILL RATE	10	84.3%	58.1%	98.6%	13.0%
% FILLED LOCALLY	7	23.4%	1.0%	50.0%	17.7%
% FILLED IN STATE	9	36.7%	11.0%	75.0%	18.0%

105.

A: SURVEY OF 100 LIBRARIES. LARGE   ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
          10LIBRARIES INCLUDED
       D: NUMBER OF INSTITUTIONS QUERIED

STRATA	LIBRARIES REPORTING TOTAL	THIS STRATA	PERCENT
1.0-1.4	10	1.	10.0%
1.5-1.9	10	4.	40.0%
2.0-2.4	10	1.	10.0%
2.5-2.9	10	3.	30.0%
3.0-3.4	10	1.	10.0%
3.5-3.9	10	0.	0.0%
4.0-4.4	10	0.	0.0%
4.5-4.9	10	0.	0.0%
5.0-5.4	10	0.	0.0%

MODE   1.5-1.9

AVERAGE 1.9

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
         IOLIBRARIES INCLUDED
    E: TIME REQUIRED TO FILL A REQUEST

SOURCE	NUMBER OF LIBRARIES REPORTING	AVERAGE	AVERAGE DAYS LOW	HIGH	STD DEV
THROUGH A BIB CENTER	7	19.	5.	60.	17.
FROM A LIBRARY LOCALLY	9	6.	3.	14.	3.
ELSEWHERE IN STATE	10	10.	3.	15.	3.
ADJOINING STATES	9	17.	10.	21.	4.
ELSEWHERE	10	27.	18.	45.	7.
OVERALL	10	16.	6.	27.	8.

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
 10LIBRARIES INCLUDED
    F: VERIFICATION

 9 LIBRARIES OF   9 LIBRARIES RESPONDING NORMALLY VERIFY BORROWING REQUESTS

OR100.0%

 2 LIBRARIES OF   10 LIBRARIES RESPONDING NORMALLY VERIFY LENDING REQUESTS

OR 20.0%

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
    10 LIBRARIES INCLUDED
    G: FREQUENCY OF BORROWERS TABLE

STRATA	NUMBER OF LIBRARIES REPORTING	TOTAL OBSERVATIONS	FREQUENCY IN TABLE				PLACE IN TABLE			
			AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
LARGE ACADEMIC LIBRARY	8	18	2.	1.	4.	1.	5.	1.	10.	3.
STATE LIBRARY	2	3	2.	1.	2.	1.	7.	5.	10.	2.
LARGE PUBLIC LIBRARY	3	3	1.	1.	1.	0.	6.	6.	7.	0.
OTHER REGIONAL LIBRARY	2	2	1.	1.	1.	0.	4.	2.	5.	2.
OTHER ACADEMIC LIBRARY	10	48	5.	2.	7.	1.	5.	1.	10.	3.
OTHER PUBLIC LIBRARY	1	3	3.	3.	3.	0.	6.	3.	10.	3.
BIBLIOGRAPHIC CENTER	1	1	1.	1.	1.	0.	4.	4.	4.	0.
SPECIAL LIBRARY	7	9	1.	1.	2.	0.	5.	1.	10.	3.
OTHER LIBRARY	4	5	1.	1.	2.	0.	4.	1.	7.	2.

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
        10 LIBRARIES INCLUDED
     H: FREQUENCY OF LENDERS TABLE

STRATA	LIBRARIES REPORTING	TOTAL OBSERVATIONS	FREQUENCY IN TABLE AVERAGE	LOW	HIGH	STD DEV	AVERAGE	PLACE IN TABLE LOW	HIGH	STD DEV
LARGE ACADEMIC LIBRARY	10	51	5.	1.	8.	2.	7.	1.	10.	3.
STATE LIBRARY	5	8	2.	1.	2.	0.	4.	1.	9.	3.
LARGE PUBLIC LIBRARY	1	1	1.	1.	1.	0.	9.	9.	9.	0.
OTHER REGIONAL LIBRARY	0	0	0.	0.	0.	0.	0.	0.	0.	0.
OTHER ACADEMIC LIBRARY	7	14	2.	1.	3.	1.	6.	1.	10.	3.
OTHER PUBLIC LIBRARY	1	1	1.	1.	1.	0.	2.	2.	2.	0.
BIBLIOGRAPHIC CENTER	1	1	1.	1.	1.	0.	4.	4.	4.	0.
SPECIAL LIBRARY	3	4	1.	1.	2.	0.	3.	1.	5.	2.
OTHER LIBRARY	3	4	1.	1.	2.	0.	5.	3.	8.	2.

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
    INLIBRARIES INCLUDED
   I: LOCATION OF BORROWERS TABLE

STRATA	NUMBER OF LIBRARIES REPORTING	TOTAL OBSERVATIONS	FREQUENCY IN TABLE				PLACE IN TABLE			
			AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
LOCAL LIBRARY	7	32	5.	2.	8.	3.	5.	1.	10.	3.
ELSEWHERE IN STATE	8	40	5.	1.	9.	3.	5.	1.	10.	3.
ADJOINING STATES	8	17	2.	1.	3.	1.	6.	2.	9.	2.
OTHER WESTERN STATES	2	3	2.	1.	2.	1.	7.	5.	10.	2.
OTHER EASTERN STATES	0	0	0.	0.	0.	0.	0.	0.	0.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
          10 LIBRARIES INCLUDED
       J: LOCATION OF LENDERS TABLE

STRATA	LIBRARIES REPORTING	NUMBER OF TOTAL OBSERVATIONS	FREQUENCY IN TABLE AVERAGE	LOW	HIGH	STD DEV	PLACE IN TABLE AVERAGE	LOW	HIGH	STD DEV
LOCAL LIBRARY	3	9	3.	2.	5.	1.	4.	1.	10.	3.
ELSEWHERE IN STATE	7	19	3.	1.	7.	2.	4.	1.	8.	2.
ADJOINING STATES	8	21	3.	1.	5.	1.	5.	2.	10.	3.
OTHER STATES WESTERN	4	6	2.	1.	3.	1.	8.	1.	10.	3.
OTHER STATES EASTERN	8	29	4.	2.	6.	1.	6.	1.	10.	2.

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
  10 LIBRARIES INCLUDED
K: CHARACTERISTICS OF FILLED BORROWING REQUESTS

TYPE OF MATERIALS	NUMBER OF LIBRARIES REPORTING	PHOTOCOPY/DUPLICATE				PERCENT OF TOTAL			
		AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
BOOKSTOCK	3	48.	20.	100.	37.	3.4%	1.6%	6.5%	2.2
PERIODICALS	8	2220.	1366.	4000.	900.	98.5%	91.9%	100.0%	2.6
MICROFORMS	4	58.	5.	150.	56.	51.0%	4.0%	100.0%	34.0
AUDIO/VISUAL	0	0.	0.	0.	0.	0.0%	0.0%	0.0%	0.0
GOVERNMENT DOCUMENTS	1	15.	15.	15.	0.	75.0%	75.0%	75.0%	0.0
OTHER	1	450.	450.	450.	0.	56.3%	56.3%	56.3%	0.0
TOTAL	10	2233.	1193.	4150.	967.	50.4%	35.8%	66.7%	7.8

TYPE OF MATERIALS	NUMBER OF LIBRARIES REPORTING	ORIGINAL				PERCENT OF TOTAL			
		AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
BOOKSTOCK	8	1894.	973.	2648.	509.	98.7%	93.5%	100.0%	2.1
PERIODICALS	4	52.	10.	123.	43.	3.0%	0.6%	8.1%	3.0
MICROFORMS	4	79.	25.	120.	42.	74.0%	50.0%	100.0%	24.0
AUDIO/VISUAL	3	9.	1.	25.	11.	100.0%	100.0%	100.0%	0.0
GOVERNMENT DOCUMENTS	5	138.	5.	369.	139.	85.0%	25.0%	100.0%	30.0
OTHER	2	176.	1.	350.	175.	71.9%	43.8%	100.0%	28.1
TOTAL	10	2111.	1023.	3467.	597.	49.6%	33.3%	64.2%	7.8

TABLE X: INTERLIBRARY LOAN DEPARTMENT
K: CHARACTERISTICS OF FILLED BORROWING REQUESTS

TYPE OF MATERIALS	NUMBER OF LIBRARIES REPORTING	TOTAL				PERCENT OF TOTAL			
		AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
BOOKSTOCK	8	1912.	993.	2648.	492.	100.0%	100.0%	100.0%	0.0
PERIODICALS	8	2246.	1391.	4000.	892.	100.0%	100.0%	100.0%	0.0
MICROFORMS	5	109.	50.	150.	34.	100.0%	100.0%	100.0%	0.0
AUDIO/VISUAL	3	9.	1.	25.	11.	100.0%	100.0%	100.0%	0.0
GOVERNMENT DOCUMENTS	5	141.	20.	369.	137.	100.0%	100.0%	100.0%	0.0
OTHER	2	401.	1.	800.	400.	100.0%	100.0%	100.0%	0.0
TOTAL	10	4343.	2434.	7377.	1413.	100.0%	100.0%	100.0%	0.0

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED
L: CHARACTERISTICS OF FILLED LENDING REQUESTS

TYPE OF MATERIALS	NUMBER OF LIBRARIES REPORTING	PHOTOCOPY/DUPLICATE				PERCENT OF TOTAL			
		AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
BOOKSTOCK	1	60.	60.	60.	0.	2.3%	2.3%	2.3%	0.0
PERIODICALS	8	4016.	1000.	14295.	3997.	98.4%	87.7%	100.0%	4.0
MICROFORMS	4	158.	25.	375.	131.	67.7%	16.7%	100.0%	33.4
AUDIO/VISUAL	0	0.	0.	0.	0.	0.0%	0.0%	0.0%	0.0
GOVERNMENT DOCUMENTS	1	12.	12.	12.	0.	25.0%	25.0%	25.0%	0.0
OTHER	1	50.	50.	50.	0.	8.0%	8.0%	8.0%	0.0
TOTAL	10	4235.	1025.	14445.	3635.	45.5%	30.0%	58.9%	9.5

TYPE OF MATERIALS	NUMBER OF LIBRARIES REPORTING	ORIGINAL				PERCENT OF TOTAL			
		AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
BOOKSTOCK	8	3487.	1150.	7725.	2238.	99.7%	97.7%	100.0%	0.8
PERIODICALS	2	1006.	12.	2000.	994.	6.5%	0.8%	12.3%	5.8
MICROFORMS	3	203.	20.	500.	212.	43.1%	5.1%	83.3%	32.0
AUDIO/VISUAL	3	1795.	5.	5278.	2463.	100.0%	100.0%	100.0%	0.0
GOVERNMENT DOCUMENTS	4	194.	20.	391.	168.	93.8%	75.0%	100.0%	10.8
OTHER	1	575.	575.	575.	0.	92.0%	92.0%	92.0%	0.0
TOTAL	10	4788.	1175.	11130.	2938.	54.3%	41.1%	70.0%	9.5

TABLE X: INTERLIBRARY LOAN DEPARTMENT
L: CHARACTERISTICS OF FILLED LENDING REQUESTS

TYPE OF MATERIALS	NUMBER OF LIBRARIES REPORTING	TOTAL				PERCENT OF TOTAL			
		AVERAGE	LOW	HIGH	STD DEV	AVERAGE	LOW	HIGH	STD DEV
BOOKSTOCK	8	3494.	1150.	7725.	2235.	100.0%	100.0%	100.0%	0.0
PERIODICALS	8	4267.	1000.	16295.	4642.	100.0%	100.0%	100.0%	0.0
MICROFORMS	4	310.	25.	600.	213.	100.0%	100.0%	100.0%	0.0
AUDIO/VISUAL	3	1795.	5.	5278.	2463.	100.0%	100.0%	100.0%	0.0
GOVERNMENT DOCUMENTS	4	197.	20.	391.	165.	100.0%	100.0%	100.0%	0.0
OTHER	1	625.	625.	625.	0.	100.0%	100.0%	100.0%	0.0
TOTAL	10	9028.	2250.	25575.	6267.	100.0%	100.0%	100.0%	0.0

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE XI: ADMINISTRATIVE DEPARTMENT
   10 LIBRARIES INCLUDED
   A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	DEPARTMENT LOW	HIGH	STD DEV	NUMBER OF LIBRARIES REPORTING	INCREASE OVER LAST YEAR'S EXPENDITURES AVERAGE	LOW	HIGH	STD DEV
TOTAL OPERATING	10	241087.	108011.	606537.	133704.	10	24765.	4875.	55641.	15299.
SALARIES AND FRINGE BENEFITS	10	221325.	101651.	468451.	97174.	10	28395.	4885.	55641.	17189.
AUTOMATED SYSTEMS	1	10276.	10276.	10276.	0.	1	7876.	7876.	7876.	0.
OTHER SUPPORT SERVICES	4	30431.	1700.	115219.	48954.	4	-14963.	-42822.	239.	19727.
EQUIPMENT RENTAL	3	14542.	2400.	27600.	10308.	3	2896.	960.	4832.	1936.
COMMUNICATIONS	4	3882.	990.	7536.	2450.	4	-182.	-500.	308.	308.
SUPPLIES	4	1569.	770.	2298.	546.	4	-186.	-1278.	261.	632.
OTHER OPERATING	1	200.	200.	200.	0.	1	20.	20.	20.	0.

A: SURVEY OF 100 LIBRARIES. LARGE   ACADEMIC STRATUM

TABLE XI: ADMINISTRATIVE DEPARTMENT
10 LIBRARIES INCLUDED
A: BUDGET PROFILE

BUDGET CATEGORY	NUMBER OF LIBRARIES REPORTING	AVERAGE	LAST YEAR'S EXPENDITURES LOW	HIGH	STD DEV
TOTAL OPERATING	10	218799.	103136.	593785.	132606.
SALARIES AND FRINGE BENEFITS	10	195770.	96766.	416057.	84057.
AUTOMATED SYSTEMS	1	2400.	2400.	2400.	0.
OTHER SUPPORT SERVICES	4	41653.	1461.	158041.	67211.
EQUIPMENT RENTAL	3	12611.	2400.	26640.	10258.
COMMUNICATIONS	4	4063.	1150.	7910.	2471.
SUPPLIES	4	1755.	640.	2984.	865.
OTHER OPERATING	1	180.	180.	180.	0.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC STRATUM

TABLE XI: ADMINISTRATIVE DEPARTMENT
    10 LIBRARIES INCLUDED
B: STAFFING AND SALARY EXPENDITURES

TYPE OF EMPLOYEE	NUMBER OF LIBRARIES REPORTING	FULL TIME EQUIVALENCIES				NUMBER OF LIBRARIES REPORTING	ANNUAL SALARY EXPENDITURES,$			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	10	4.95	2.00	8.00	1.74	10	115477.	52340.	189444.	36056.
OTHER PROFESSIONAL	5	1.80	1.00	3.00	0.75	5	29698.	13600.	54000.	14362.
LIBRARY ASSISTANT	2	3.50	1.00	6.00	2.50	2	36512.	10328.	62695.	26183.
CLERK	9	6.06	2.00	14.50	4.40	9	55725.	11258.	130608.	42123.
STUDENT / PAGE	7	1.14	0.25	2.80	0.98	8	5081.	593.	12896.	4398.
OTHER	3	2.50	1.00	3.50	1.08	3	26659.	12576.	41352.	11756.
STAFF PAID BY OUTSIDE SOURCES	3	2.55	0.30	6.35	2.70	0	0.	0.	0.	0.
VOLUNTEER	0	0.0	0.0	0.0	0.0	0	0.	0.	0.	0.

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	AVERAGE SALARY PER FTE			
		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	49.50	23329.	16178.	28442.	4729.
OTHER PROFESSIONAL	9.00	16499.	13600.	18000.	1377.
LIBRARY ASSISTANT	7.00	10432.	10328.	10449.	42.
CLERK	54.50	9202.	5629.	11322.	1239.
STUDENT / PAGE	7.99	4910.	1977.	8567.	1420.
OTHER	7.50	10664.	8683.	12576.	1636.

A: SURVEY OF 100 LIBRARIES, LARGE   ACADEMIC   STRATUM

TABLE VI: ADMINISTRATIVE DEPARTMENT
    10   LIBRARIES INCLUDED
    B: STAFFING AND SALARY EXPENDITURES

TYPE OF EMPLOYEE	NUMBER OF FTE REPORTED	TOTAL LIBRARY FTE PER ADM FTE				NUMBER OF LIBRARIES REPORTING	ADM SAL $ EXP PER TOTAL LIBRARY FTE ANNUAL			
		AVERAGE	LOW	HIGH	STD DEV		AVERAGE	LOW	HIGH	STD DEV
PROFESSIONAL LIBRARIAN	49.50	51.20	19.80	114.25	19.69	10	532.18	279.06	1318.80	297.52
OTHER PROFESSIONAL	9.00	133.23	49.50	228.50	78.74	5	155.14	59.52	313.92	105.13
LIBRARY ASSISTANT	7.00	81.57	78.67	99.00	7.12	2	118.58	104.32	132.83	14.25
CLERK	54.50	37.84	14.14	114.25	27.97	9	253.05	55.14	564.66	182.72
STUDENT / PAGE	7.99	220.62	75.36	780.00	182.15	8	20.52	2.90	54.27	15.29
OTHER	7.50	115.30	68.06	217.49	48.42	3	92.91	57.82	127.58	28.48
STAFF PAID BY OUTSIDE SOURCES	7.65	82.70	34.25	680.60	134.61	0	0.0	0.0	0.0	0.0
VOLUNTEER	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
TOTAL	143.14	17.71	6.60	38.08	8.59	10	905.50	386.53	2315.98	513.22

APPENDIX F

TABLES GENERATED BY THE FACT SUBROUTINE

LIBRARY NO 1
ILL ACTIVITY SHEET SUMMARY I: TIME PROFILE

ACT NO	TIME·MIN EMPLOYEE CATEGORY*									PERCENT OF TOTAL GROUP TIME EMPLOYEE CATEGORY*							
	A	B	C	D	E	F	G	H	TOTAL	A	B	C	D	E	F	G	H
1	0	0	1095	0	0	0	0	0	1095	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	195	0	640	0	149	0	0	0	984	2.2%	0.0%	2.9%	0.0%	2.5%	0.0%	0.0%	0.0%
3	0	0	270	0	0	0	0	0	270	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%
4	0	0	315	0	0	0	0	0	315	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
5	0	0	855	0	0	0	0	0	855	0.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%
6	0	0	465	0	1150	0	0	0	1615	0.0%	0.0%	2.1%	0.0%	19.6%	0.0%	0.0%	0.0%
7	0	0	115	0	350	0	0	0	465	0.0%	0.0%	0.5%	0.0%	6.0%	0.0%	0.0%	0.0%
8	0	0	120	0	5	0	0	0	125	0.0%	0.0%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%
9	0	0	95	0	1004	247	0	0	1346	0.0%	0.0%	0.4%	0.0%	17.2%	8.4%	0.0%	0.0%
10	0	0	0	0	0	1741	0	0	1741	0.0%	0.0%	0.0%	0.0%	0.0%	59.2%	0.0%	0.0%
11	0	0	335	0	894	0	0	0	1229	0.0%	0.0%	1.5%	0.0%	15.3%	0.0%	0.0%	0.0%
12	0	0	195	230	330	46	0	0	801	0.0%	0.0%	0.9%	45.1%	5.6%	1.6%	0.0%	0.0%
13	0	0	200	0	0	0	0	0	200	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
14	0	0	120	45	0	0	0	0	165	0.0%	0.0%	0.5%	8.8%	0.0%	0.0%	0.0%	0.0%
15	0	0	110	0	0	82	0	0	192	0.0%	0.0%	0.5%	0.0%	0.0%	2.8%	0.0%	0.0%
16	0	0	2690	0	0	0	0	0	2690	0.0%	0.0%	12.2%	0.0%	0.0%	0.0%	0.0%	0.0%
17					-NE-												
18					-NE-												
19	80	0	0	0	0	0	0	0	80	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	225	0	1525	0	0	191	0	0	1941	2.5%	0.0%	6.9%	0.0%	0.0%	6.5%	0.0%	0.0%
21	785	0	1725	0	0	0	0	0	2510	8.7%	0.0%	7.8%	0.0%	0.0%	0.0%	0.0%	0.0%
22	0	0	615	0	0	0	0	0	615	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%
23	0	0	350	0	355	0	0	0	705	0.0%	0.0%	1.6%	0.0%	6.1%	0.0%	0.0%	0.0%
24	50	0	265	40	420	77	0	0	852	0.6%	0.0%	1.2%	7.8%	7.2%	2.6%	0.0%	0.0%

NOTE: -NE- , NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A,PROFESSIONAL LIBRARIAN; B, OTHER PROFESSIONAL; C, LIBRARY ASSISTANT; D, CLERK;
F. STUDENT/PAGE; F. OTHER; G. PAID BY OUTSIDE SOURCE; H. VOLUNTFER.

LIBRARY NO 1
ILL ACTIVITY SHEET SUMMARY I: TIME PROFILE

ACT NO	TIME-MIN EMPLOYEE CATEGORY*									PERCENT OF TOTAL GROUP TIME EMPLOYEE CATEGORY*							
	A	B	C	D	E	F	G	H	TOTAL	A	B	C	D	E	F	G	H
25	0	0	1195	0	0	0	0	0	1195	0.0%	0.0%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%
26	0	0	725	0	0	0	0	0	725	0.0%	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%
27	0	0	205	0	0	0	0	0	205	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
28	0	0	215	0	0	395	0	0	610	0.0%	0.0%	1.0%	0.0%	0.0%	13.4%	0.0%	0.0%
29	10	0	185	0	0	0	0	0	195	0.1%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
30	0	0	135	0	0	0	0	0	135	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
31	420	0	405	0	0	0	0	0	825	4.6%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
32	0	0	0	195	236	50	0	0	481	0.0%	0.0%	0.0%	38.2%	4.0%	1.7%	0.0%	0.0%
33	0	0	200	0	0	0	0	0	200	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
34	1620	0	3525	0	60	50	0	0	5255	17.9%	0.0%	16.0%	0.0%	1.0%	1.7%	0.0%	0.0%
35	135	0	1180	0	230	60	0	0	1605	1.5%	0.0%	5.3%	0.0%	3.9%	2.0%	0.0%	0.0%
36	200	0	475	0	550	0	0	0	1225	2.2%	0.0%	2.2%	0.0%	9.4%	0.0%	0.0%	0.0%
37	20	0	210	0	0	0	0	0	230	0.2%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
38	0	0	175	0	0	0	0	0	175	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
39	0	0	380	0	0	0	0	0	380	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%
40	0	0	105	0	0	0	0	0	105	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
41	0	0	100	0	0	0	0	0	100	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
42	0	0	560	0	120	0	0	0	680	0.0%	0.0%	2.5%	0.0%	2.1%	0.0%	0.0%	0.0%
43	5295	0	0	0	0	0	0	0	5295	58.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	9035	0	22075	510	5853	2939	0	0	40412	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%

NOTE: -NE- , NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A, PROFESSIONAL LIBRARIAN; B, OTHER PROFESSIONAL; C, LIBRARY ASSISTANT; D, CLERK;
E, STUDENT/PAGE; F, OTHER; G, PAID BY OUTSIDE SOURCE; H, VOLUNTEER.

LIBRARY NO 1
ILL ACTIVITY SHEET SUMMARY II: TASK TIME PROFILE

ACT NO	TOTAL TASK TIME,MIN	PERCENT OF TOTAL TASK TIME EMPLOYEE CATEGORY*								VOLUME	UNIT TIME,MIN	INC
		A	B	C	D	E	F	G	H			
1	1095	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1438	0.76	0
2	984	19.8%	0.0%	65.0%	0.0%	15.1%	0.0%	0.0%	0.0%	142	6.93	0
3	270	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	268	1.01	0
4	315	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	248	1.27	0
5	855	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	284	3.01	0
6	1615	0.0%	0.0%	28.8%	0.0%	71.2%	0.0%	0.0%	0.0%	670	2.41	0
7	465	0.0%	0.0%	24.7%	0.0%	75.3%	0.0%	0.0%	0.0%	336	1.38	0
8	125	0.0%	0.0%	96.0%	0.0%	4.0%	0.0%	0.0%	0.0%	239	0.52	0
9	1346	0.0%	0.0%	7.1%	0.0%	74.6%	18.4%	0.0%	0.0%	4154	0.32	1
10	1741	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	2386	0.73	0
11	1229	0.0%	0.0%	27.3%	0.0%	72.7%	0.0%	0.0%	0.0%	581	2.12	0
12	801	0.0%	0.0%	24.3%	28.7%	41.2%	5.7%	0.0%	0.0%	315	2.54	0
13	200	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	150	1.33	0
14	165	0.0%	0.0%	72.7%	27.3%	0.0%	0.0%	0.0%	0.0%	110	1.50	0
15	192	0.0%	0.0%	57.3%	0.0%	0.0%	42.7%	0.0%	0.0%	298	0.64	0
16	2690	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1891	1.42	0
17	-NE-											
18	-NE-											
19	80	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-NE-		
20	1941	11.6%	0.0%	78.6%	0.0%	0.0%	9.8%	0.0%	0.0%	452	3.19	1
21	2510	31.3%	0.0%	68.7%	0.0%	0.0%	0.0%	0.0%	0.0%	403	6.23	0
22	615	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	253	2.43	0
23	705	0.0%	0.0%	49.6%	0.0%	50.4%	0.0%	0.0%	0.0%	511	1.38	0
24	852	5.9%	0.0%	31.1%	4.7%	49.3%	9.0%	0.0%	0.0%	296	2.71	1

NOTE: -NE- , NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A.PROFESSIONAL LIBRARIAN; B. OTHER PROFESSIONAL; C. LIBRARY ASSISTANT; D. CLERK;
E. STUDENT/PAGE; F. OTHER; G. PAID BY OUTSIDE SOURCE; H. VOLUNTEER.

LIBRARY NO 1
ILL   ACTIVITY SHEET SUMMARY II: TASK TIME PROFILE

ACT NO	TOTAL TASK TIME.MIN	PERCENT OF TOTAL TASK TIME EMPLOYEE CATEGORY*								VOLUME	UNIT TIME.MIN	INC
		A	B	C	D	E	F	G	H			
25	1195	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	692	1.73	0
26	725	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	291	2.49	0
27	205	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	82	2.50	0
28	610	0.0%	0.0%	35.2%	0.0%	0.0%	64.8%	0.0%	0.0%	110	1.95	1
29	195	5.1%	0.0%	94.9%	0.0%	0.0%	0.0%	0.0%	0.0%	32	6.09	0
30	135	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32	4.22	0
31	825	50.9%	0.0%	49.1%	0.0%	0.0%	0.0%	0.0%	0.0%	388	2.05	1
32	481	0.0%	0.0%	0.0%	40.5%	49.1%	10.4%	0.0%	0.0%	128	3.76	0
33	200	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	704	0.28	0
34	5255	30.8%	0.0%	67.1%	0.0%	1.1%	1.0%	0.0%	0.0%	533	0.66	1
35	1605	8.4%	0.0%	73.5%	0.0%	14.3%	3.7%	0.0%	0.0%	-NE-		
36	1225	16.3%	0.0%	38.8%	0.0%	44.9%	0.0%	0.0%	0.0%	55	1.18	1
37	230	8.7%	0.0%	91.3%	0.0%	0.0%	0.0%	0.0%	0.0%	42	5.00	1
38	175	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	56	1.07	1
39	380	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	233	1.63	0
40	105	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	74	1.42	0
41	100	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4	5.00	1
42	680	0.0%	0.0%	82.4%	0.0%	17.6%	0.0%	0.0%	0.0%	765	0.51	1
43	5295	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-NE-		
TOTAL	40412	22.4%	0.0%	54.6%	1.3%	14.5%	7.3%	0.0%	0.0%			

NOTE: -NE- . NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A, PROFESSIONAL LIBRARIAN; B, OTHER PROFESSIONAL; C, LIBRARY ASSISTANT; D, CLERK;
   E, STUDENT/PAGE; F, OTHER; G, PAID BY OUTSIDE SOURCE; H, VOLUNTEER.

LIBRARY NO 1
ILL ACTIVITY SHEET SUMMARY III: COST PROFILE

ACT NO	TASK COST($) BY EMPLOYEE CATEGORY*								DIRECT TASK COST,$	ADMIN.# TASK COST,$	VOL-UME	DIRECT UNIT COST,$	ADMIN.# UNIT COST,$	TOTAL UNIT COST,$	INC
	A	B	C	D	E	F	G	H							
1	0.0	0.0	90.81	0.0	0.0	0.0	0.0	0.0	90.81	6.63	1438	0.06	0.00	0.07	0
2	37.80	0.0	56.80	0.0	5.71	0.0	0.0	0.0	100.31	5.96	142	0.71	0.04	0.75	0
3	0.0	0.0	23.96	0.0	0.0	0.0	0.0	0.0	23.96	1.63	268	0.09	0.01	0.10	0
4	0.0	0.0	28.12	0.0	0.0	0.0	0.0	0.0	28.12	1.91	248	0.11	0.01	0.12	0
5	0.0	0.0	76.14	0.0	0.0	0.0	0.0	0.0	76.14	5.18	284	0.27	0.02	0.29	0
6	0.0	0.0	41.21	0.0	44.08	0.0	0.0	0.0	85.30	9.78	670	0.13	0.01	0.14	0
7	0.0	0.0	10.27	0.0	13.42	0.0	0.0	0.0	23.68	2.82	336	0.07	0.01	0.08	0
8	0.0	0.0	10.71	0.0	0.19	0.0	0.0	0.0	10.90	0.76	239	0.05	0.00	0.05	0
9	0.0	0.0	8.48	0.0	39.09	16.80	0.0	0.0	64.37	8.15	4154	0.02	0.00	0.02	1
10	0.0	0.0	0.0	0.0	0.0	207.57	0.0	0.0	207.57	10.54	2386	0.09	0.00	0.09	0
11	0.0	0.0	29.65	0.0	34.27	0.0	0.0	0.0	63.92	7.44	581	0.11	0.01	0.12	0
12	0.0	0.0	17.41	11.99	12.65	3.81	0.0	0.0	45.86	4.85	315	0.15	0.02	0.16	0
13	0.0	0.0	17.86	0.0	0.0	0.0	0.0	0.0	17.86	1.21	150	0.12	0.01	0.13	0
14	0.0	0.0	10.71	2.34	0.0	0.0	0.0	0.0	13.06	1.00	110	0.12	0.01	0.13	0
15	0.0	0.0	9.82	0.0	0.0	6.80	0.0	0.0	16.62	1.16	298	0.06	0.00	0.06	0
16	0.0	0.0	198.23	0.0	0.0	0.0	0.0	0.0	198.23	16.29	1891	0.10	0.01	0.11	0
17	-NE-														
18	-NE-														
19	15.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.51	0.48	-NE-	0.32	0.02	0.34	1
20	43.61	0.0	135.40	0.0	0.0	24.18	0.0	0.0	203.19	11.75	452	0.87	0.04	0.90	1
21	152.17	0.0	196.46	0.0	0.0	0.0	0.0	0.0	348.62	15.20	403	0.28	0.04	0.29	0
22	0.0	0.0	70.04	0.0	0.0	0.0	0.0	0.0	70.04	3.72	253	0.28	0.01	0.29	0
23	0.0	0.0	25.71	0.0	13.61	0.0	0.0	0.0	39.32	4.27	511	0.08	0.01	0.09	0
24	9.69	0.0	19.67	2.08	16.10	6.38	0.0	0.0	53.93	5.16	296	0.15	0.02	0.17	1

NOTE: -NE- : NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A=PROFESSIONAL LIBRARIAN; B. OTHER PROFESSIONAL; C. LIBRARY ASSISTANT; D. CLERK;
E. STUDENT/PAGE; F. OTHER; G. PAID BY OUTSIDE SOURCE; H. VOLUNTEER.
ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

LIBRARY NO 1
ILL ACTIVITY SHEET SUMMARY III: COST PROFILE

ACT NO	TASK COST($) BY EMPLOYEE CATEGORY*								DIRECT TASK COST.$	ADMIN.# TASK COST.$	VOL-UME	DIRECT UNIT COST.$	ADMIN.# UNIT COST.$	TOTAL UNIT COST.$	INC
	A	B	C	D	E	F	G	H							
25	0.0	0.0	101.53	0.0	0.0	0.0	0.0	0.0	101.53	7.23	692	0.15	0.01	0.16	0
26	0.0	0.0	70.24	0.0	0.0	0.0	0.0	0.0	70.24	4.39	291	0.24	0.02	0.26	0
27	0.0	0.0	23.35	0.0	0.0	0.0	0.0	0.0	23.35	1.24	82	0.28	0.02	0.30	0
28	0.0	0.0	15.79	0.0	0.0	51.44	0.0	0.0	67.23	3.69	110	0.14	0.01	0.16	1
29	1.94	0.0	13.59	0.0	0.0	0.0	0.0	0.0	15.53	1.18	32	0.49	0.04	0.52	0
30	0.0	0.0	9.92	0.0	0.0	0.0	0.0	0.0	9.92	0.82	32	0.31	0.03	0.34	0
31	81.41	0.0	29.75	0.0	0.0	0.0	0.0	0.0	111.16	4.99	388	0.27	0.01	0.28	1
32	0.0	0.0	0.0	10.16	9.05	4.14	0.0	0.0	23.35	2.91	128	0.18	0.02	0.21	0
33	0.0	0.0	14.69	0.0	0.0	0.0	0.0	0.0	14.69	1.21	704	0.02	0.00	0.02	0
34	314.02	0.0	320.59	0.0	2.30	6.51	0.0	0.0	643.42	31.82	533	0.05	0.00	0.05	1
35	26.17	0.0	106.71	0.0	8.82	6.75	0.0	0.0	148.45	9.72	-NE-				
36	38.77	0.0	44.71	0.0	21.08	0.0	0.0	0.0	104.56	7.42	55	0.10	0.01	0.11	1
37	3.88	0.0	15.43	0.0	0.0	0.0	0.0	0.0	19.30	1.39	42	0.37	0.03	0.40	1
38	0.0	0.0	15.62	0.0	0.0	0.0	0.0	0.0	15.62	1.06	56	0.10	0.01	0.10	1
39	0.0	0.0	43.28	0.0	0.0	0.0	0.0	0.0	43.28	2.30	233	0.19	0.01	0.20	0
40	0.0	0.0	11.96	0.0	0.0	0.0	0.0	0.0	11.96	0.64	74	0.16	0.01	0.17	0
41	0.0	0.0	11.39	0.0	0.0	0.0	0.0	0.0	11.39	0.61	4	0.57	0.03	0.60	1
42	0.0	0.0	43.16	0.0	4.60	0.0	0.0	0.0	47.76	4.12	765	0.04	0.00	0.04	1
43	1026.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1026.39	32.06	-NE-				
TOTAL	1751.36	0.0	1969.15	26.58	224.97	334.38	0.0	0.0	4306.43	244.67					

NOTE: -NE- , NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A.PROFESSIONAL LIBRARIAN; B. OTHER PROFESSIONAL; C. LIBRARY ASSISTANT; D. CLERK;
            E. STUDENT/PAGE; F. OTHER; G. OUTSIDE SOURCE; H. VOLUNTEER.
ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

LIBRARY NO 1
ILL ACTIVITY SHEET SUMMARY IV: PROFILE OF TOTAL TASK COST

ACT NO	DIRECT TASK COST.$	ADMIN. DEPT.# BUDGET	ADMIN. TASK## COST.$	TOTAL TASK COST.$	ADMIN. (2)	PERCENT OF TOTAL TASK COST EMPLOYEE CATEGORY*							
						A	B	C	D	E	F	G	H
1	90.81	6.63	21.03	118.48	23.3%	0.0%	0.0%	76.7%	0.0%	0.0%	0.0%	0.0%	0.0%
2	100.31	5.96	18.90	125.16	19.9%	30.2%	0.0%	45.4%	0.0%	4.6%	0.0%	0.0%	0.0%
3	23.96	1.63	5.19	30.78	22.2%	0.0%	0.0%	77.8%	0.0%	0.0%	0.0%	0.0%	0.0%
4	28.12	1.91	6.05	36.08	22.1%	0.0%	0.0%	77.9%	0.0%	0.0%	0.0%	0.0%	0.0%
5	76.14	5.18	16.42	97.74	22.1%	0.0%	0.0%	77.9%	0.0%	0.0%	0.0%	0.0%	0.0%
6	85.30	9.78	31.02	126.09	32.4%	0.0%	0.0%	32.7%	0.0%	35.0%	0.0%	0.0%	0.0%
7	23.68	2.82	8.93	35.43	33.2%	0.0%	0.0%	29.0%	0.0%	37.9%	0.0%	0.0%	0.0%
8	10.90	0.76	2.40	14.06	22.5%	0.0%	0.0%	76.2%	0.0%	1.4%	0.0%	0.0%	0.0%
9	64.37	8.15	25.85	98.38	34.6%	0.0%	0.0%	8.6%	0.0%	39.7%	17.1%	0.0%	0.0%
10	207.57	10.54	33.44	251.55	17.5%	0.0%	0.0%	0.0%	0.0%	0.0%	82.5%	0.0%	0.0%
11	63.92	7.44	23.60	94.97	32.7%	0.0%	0.0%	31.2%	0.0%	36.1%	0.0%	0.0%	0.0%
12	45.86	4.85	15.38	66.09	30.6%	0.0%	0.0%	26.3%	18.1%	19.1%	5.8%	0.0%	0.0%
13	17.86	1.21	3.84	22.91	22.1%	0.0%	0.0%	77.9%	0.0%	0.0%	0.0%	0.0%	0.0%
14	13.06	1.00	3.17	17.23	24.2%	0.0%	0.0%	62.2%	13.6%	0.0%	0.0%	0.0%	0.0%
15	16.62	1.16	3.69	21.47	22.6%	0.0%	0.0%	45.7%	0.0%	0.0%	31.7%	0.0%	0.0%
16	198.23	16.29	51.67	266.18	25.5%	0.0%	0.0%	74.5%	0.0%	0.0%	0.0%	0.0%	0.0%
17	-NE-												
18	-NE-												
19	15.51	0.48	1.54	17.53	11.5%	88.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	203.19	11.75	37.28	252.22	19.4%	17.3%	0.0%	53.7%	0.0%	0.0%	9.6%	0.0%	0.0%
21	348.62	15.20	48.21	412.03	15.4%	36.9%	0.0%	47.7%	0.0%	0.0%	0.0%	0.0%	0.0%
22	70.04	3.72	11.81	85.58	14.2%	0.0%	0.0%	81.8%	0.0%	0.0%	0.0%	0.0%	0.0%
23	39.32	4.27	13.54	57.13	31.2%	0.0%	0.0%	45.0%	0.0%	23.8%	0.0%	0.0%	0.0%
24	53.93	5.16	16.36	75.45	28.5%	12.8%	0.0%	26.1%	2.8%	21.3%	8.5%	0.0%	0.0%

NOTE: -NE- . NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A.PROFESSIONAL LIBRARIAN; B. OTHER PROFESSIONAL; C. LIBRARY ASSISTANT; D. CLERK;
  E: STUDENT/PAGE; F. OTHER; G. PAID BY OUTSIDE SOURCE; H. VOLUNTFER.
ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

LIBRARY NO 1
ILL ACTIVITY SHEET SUMMARY IV: PROFILE OF TOTAL TASK COST

ACT NO	DIRECT TASK COST, $	ADMIN. DEPT.# BUDGET	ADMIN. TASK## COST, $	TOTAL TASK COST, $	ADMIN. (2)	PERCENT OF TOTAL TASK COST EMPLOYEE CATEGORY*							
						A	B	C	D	E	F	G	H
25	101.53	7.23	22.95	131.71	22.9%	0.0%	0.0%	77.1%	0.0%	0.0%	0.0%	0.0%	0.0%
26	70.24	4.39	13.92	88.55	20.7%	0.0%	0.0%	79.3%	0.0%	0.0%	0.0%	0.0%	0.0%
27	23.35	1.24	3.94	28.53	18.2%	0.0%	0.0%	81.8%	0.0%	0.0%	0.0%	0.0%	0.0%
28	67.23	3.69	11.72	82.64	18.6%	0.0%	0.0%	19.1%	0.0%	0.0%	62.2%	0.0%	0.0%
29	15.53	1.18	3.75	20.45	24.1%	9.5%	0.0%	66.4%	0.0%	0.0%	0.0%	0.0%	0.0%
30	9.92	0.82	2.59	13.33	25.6%	0.0%	0.0%	74.4%	0.0%	0.0%	0.0%	0.0%	0.0%
31	111.16	4.99	15.85	132.00	15.8%	61.7%	0.0%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%
32	23.35	2.91	9.24	35.50	34.2%	0.0%	0.0%	0.0%	28.6%	25.5%	11.7%	0.0%	0.0%
33	14.69	1.21	3.84	19.74	25.6%	0.0%	0.0%	74.4%	0.0%	0.0%	0.0%	0.0%	0.0%
34##	643.42	31.82	## ADMINISTRATIVE TASKS. DISTRIBUTED IN 'ADMIN TASK COST' OVER ALL OTHER TASKS											
35	148.45	9.72	30.83	188.99	21.5%	13.8%	0.0%	56.5%	0.0%	4.7%	3.6%	0.0%	0.0%
36	104.56	7.42	23.53	135.51	27.8%	28.6%	0.0%	33.0%	0.0%	15.6%	0.0%	0.0%	0.0%
37	19.30	1.39	4.42	25.11	23.1%	15.4%	0.0%	61.4%	0.0%	0.0%	0.0%	0.0%	0.0%
38	15.62	1.06	3.36	20.04	22.1%	0.0%	0.0%	77.9%	0.0%	0.0%	0.0%	0.0%	0.0%
39	43.28	2.30	7.30	52.88	18.2%	0.0%	0.0%	81.8%	0.0%	0.0%	0.0%	0.0%	0.0%
40	11.96	0.64	2.02	14.61	18.2%	0.0%	0.0%	81.8%	0.0%	0.0%	0.0%	0.0%	0.0%
41	11.39	0.61	1.92	13.91	18.2%	0.0%	0.0%	81.8%	0.0%	0.0%	0.0%	0.0%	0.0%
42	47.76	4.12	13.06	64.93	26.5%	0.0%	0.0%	66.5%	0.0%	7.1%	0.0%	0.0%	0.0%
43	1026.39	32.06	101.70	1160.15	11.5%	88.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	3663.01	212.85	675.24	4551.10	19.5%	31.6%	0.0%	36.2%	0.6%	4.9%	7.2%	0.0%	0.0%

NOTE: -NE- , NO ENTRY FOR THIS TASK
* EMPLOYEE CATEGORY DESIGNATIONS: A.PROFESSIONAL LIBRARIAN; B. OTHER PROFESSIONAL; C. LIBRARY ASSISTANT; D. CLERK;
E. STUDENT/PAGE; F. OTHER; G. PAID BY OUTSIDE SOURCE; H. VOLUNTEER.
ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

APPENDIX G

SAMPLE DECK SET UPS

SAMPLE DECK, SURVEY DATA, MULTIPLE STRATA

SAMPLE CALLING DECK, SURVEY DATA, SINGLE STRATUM

DATA C*RD0
//GO.SYSIN DD *
//L.SYSIN DD *   VOL=SER=D00609
7760.F10=F001   IF   INT=$10/4,AFDRM2,UNIT=33330,DISP=OLD,
INCLUDE LIB=DCHAIN,
//LFEI.SYSIN DD *
//LFEI.LIB DD   DSN=SUBER.LINKLIB,DISP=SHR
FIN
ALL STATEMENTS BEGIN IN COLUMN 4
FORTRAN CALLING DECK AS LISTED ON PAGE
//FORT.SYSIN DD *
EXEC   FORTGCLG
TM=(0,10),CR=150K,T00609
//SETUP   JOB   C*RD0

SAMPLE DECK FOR THE USE OF THE CON SUBROUTINE

SAMPLE DECK FOR THE USE OF THE FACT SUBROUTINE

135.

```
DATA CARDS FOR THE ACTIVITY SHEETS
ALL
DATA CARDS FOR THE FRACTURES (5 CARDS)
DATA CARDS FOR THE SERIAL'S ACTIVITY SHEETS
REPEAT
DATA DEFINE ACTIVITY SHEET DATA CARDS
DATA CARDS FOR DEFINITIONS ACTIVITY SHEETS
DATA CARDS ON 45  EMPLOYEES IN THREE DEPARTMENTS
DATA CARD ON MATHEMATICAL
DATA CARD ON FUTURE REQUIRES
DATA CARD ON EACH VARIATION
DATA CARD FOR EACH TEAM
DATA CARD FOR EACH HOLIDAYS
CARD SYSIN  IN  *
INCLUDE LIB(CHECKS)
//GO.FT01   IN  *
//FEED.LIB   DD  DSN=&USER.LINKLIB,DISP=SHR
END
CALL FACT2(LIB,NDEMP)
NDEMP=5
CALL FACT3(LIB,NDEMP)
CALL FACT3K(LIB,NDEMP)
CALL FACTK(LIB,NDEMP)
LIB=500
NDEMP=45
//FORT.SYSIN  DD  *
//       EXEC  FORTGCLG
//3U   JOB CARD
```

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 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78
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 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
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APPENDIX H

PROGRAM LISTING FOR THE FACT SUBROUTINE

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FORTRAN IV G LEVEL  21                        FACT                      DATE = 76317          13/07/42              PAGE 0001

* 0001          SUBROUTINE FACT(LBN,NOEMP)
         C      THE PURPOSE OF THE SUBROUTINE FACT IS TO SUMMARIZE THE INPUT FROM
         C      THE ACTIVITY SHEETS. USING THE STAFF LISTS AND ASSOCIATED DATA
         C      FROM THE CASE STUDY FORM NUMBER 3 PRODUCING THE OUTPUT SUMMARY TABLES
         C      OF TIME AND COST FOR EACH LISTED TASK, AND UNIT TIME AND COST FOR
         C      THOSE TASKS WHERE THE VOLUME DATA IS AVAILABLE.
  0002          DIMENSION       EMCST(50),FB(7),COST(50,8),PC(50),KLTM(8),CLCS(8)
  0003          DIMENSION PTTM(8),UNTM(50),FMPC(8),IIN(7,3),ISL(7,3)
  0004          DIMENSION INV(7,3),IVD(7,3)
  0005          DIMENSION TCOST(50),ACTAC(50)
  0006          REAL*8 ACT,IUE ,EMID(50)
  0007          INTEGER TBLV(7,3),FMNK(50  ),TIME(50,8),VOL(50),PT(50),TTME(50)
         C      FORMAT LIST. FORMAT STATEMENTS NUMBERED 8,11,16,43,AND 48 USE THE
         C      'T' FORMAT.
  0008        1 FORMAT(I3,3X,I3,1X,7I5)
  0009        2 FORMAT(I3,3X,I3,1X,4I5)
  0010        3 FORMAT (2I5)
  0011        4 FORMAT(24H1EMPLOYEE COST LIST FOR ,I5,/,25H EMPID  CLASS   COST/HOU
                1UR)
  0012        5 FORMAT(1H ,A6,I5,F10.2)
  0013        6 FORMAT(I3,3X,I3,A6,I5,I10,F5.2,I3,I2,I5,5X,I5)
  0014        7 FORMAT(A8,2I5,I10,F5.0)
  0015        8 FORMAT(1H1LIBRARY NO.I5,/,1H ,A8,'ACTIVITY SHEET SUMMARY I: TIME
                1PROFILE',/,1H ,I30 (' '),/,1H ,T31,'TIME,MIN',T80,'PERCENT OF TOTA
                2L GROUP TIME',/,4H ACT,T27,'EMPLOYEE CATEGORY*',T85,'EMPLOYEF CAT
                3EGORY*',/,4H NO,7X,'A',6X,'B',6X,'C',6X,'E',6X,'F',6X,'G',
                46X,'H   TOTAL',5X,'A',7X,'B',7X,'C',7X,'D',7X,'E',7X,'F',7X,'G',
                57X,'H')
  0016        9 FORMAT(1H0,I3,2X,9I7,8(F7.1,'%'))
  0017       11 FORMAT(1H1LIBRARY NO.I5,/,1H ,A8,'ACTIVITY SHEET SUMMARY III: COS
                1T PROFILE',/,1H ,I30(' '),/,1H ,T24,'TASK COST($) BY',T75,'DIRECT
                2    ADMIN.#',T102,'DIRECT    ADMIN.   TOTAL',/,4H ACT,T23,'EMPLOYEE
                3CATEGORY*',T75,2('TASK',6X),'VOL-',1X,3(2X,'UNIT',3X),/,4H NO,7X,
                4'A',7X,'B',7X,'C',7X,'D',7X,'E',7X,'F',7X,'G',7X,'H',6X,2('COST,$'
                5,4X),'UME',1X,3(3X,'COST,$'),'   INC')
  0018       14 FORMAT(6H0TOTAL,9I7,8(F7.1,'%'))
  0019       16 FORMAT(37H0NOTE:  -NE- = NO ENTRY FOR THIS TASK,/,1H ,'* EMPLOYEE
                1CATEGORY DESIGNATIONS: A-PROFESSIONAL LIBRARIAN; B. OTHER PROFESSI
                2ONAL; C. LIBRARY ASSISTANT; D. CLERK;',/,1H ,T2],'E. STUDENT/PAGE;
                3 F. OTHER; G. PAID BY OUTSIDE SOURCE; H. VOLUNTEER.')
  0020       17 FORMAT(I3,3X,I3,1X,7F5.0)
  0021       43 FORMAT(1H1LIBRARY NO.I5,/,1H ,A8,'ACTIVITY SHEET SUMMARY II: TASK
                1 TIME PROFILE',/,1H ,I30(' '),/,1H ,T45,'PERCENT OF TOTAL TASK TIM
                2E',/,4H ACT,6X,'TOTAL TASK',T50,'EMPLOYEE CATEGORY*',T89,'VOLUME
                3  UNIT',/,
                34H  NO,7X,'TIME,MIN',6X,'A',7X,'B',7X,'C',7X,'D',7X,'E',7X,'F',7X,
                4'G',7X,'H',15X,'TIME,MIN   INC')
  0022       48 FORMAT(1H1LIBRARY NO.I5,/,1H ,A8,'ACTIVITY SHEET SUMMARY IV: PROF
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           IILE OF TOTAL TASK COST','/,1H ,130('_'),'/,1H ,10X,'DIRECT   ADMIN.
  2    ADMIN.   TOTAL','/70,'PERCENT OF TOTAL TASK COST',/,4H ACT,7X,'
  3'TASK    DEPT.#    TASK##    TASK    ADMIN.','/75,'EMPLOYEE CATEGO
  4RY#',/,4H NO.,7X,'COST,$   BUDGET    COST,$   COST,$   (2)',6X,'
  5 'A.,7X,'B',7X,'C',7X,'D',7X,'E',7X,'F',7X,'G',7X,'H')
0023   69    FORMAT(1H0,I3,10X,'-NE-')
0024   91    FORMAT(1H ,'# ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE
              1DEPARTMENT BUDGET')
0025  201    FORMAT(1H ,130('_'))
0026          IND=0
0027          GO TO 21
0028          ENTRY FACTI (LAN,NOEMP)
0029          IND=1
       C      PEAD CARD ON PAID HOLIDAYS
0030   21    READ(5,1)IPG,LIB,(TBLV(J,1),J=1,7)
       C      READ CARD ON SICK LEAVE. CHECK FOR INCREMENTAL SICK LEAVE PLAN AND READ
       C      ADDITIONAL CARDS AS NECESSARY.
              RFAD(5,1)IPG,LIB,(TBLV(J,2),J=1,7)
0031          DO 1A I=1,7
0032          IF(TBLV(I,2).GE.0) GO TO 18
0033          READ(5,1)IPG,LIB,((IINI,J).ISL(I,J)),J=1,3)
0034   18    CONTINUE
0035          READ(5,1)IPG,LIB,(TBLV(J,3),J=1,7)
       C      READ CARD ON PAID VACATION. CHECK FOR INCREMENTAL VACATION PLAN
       C      AND READ ADDITIONAL CARDS AS NECESSARY.
0037          DO 19 I=1,7
0038          IF(TBLV(I,3).GE.0) GO TO 19
0039          READ(5,1) IPG,LIB,((INV(I,J),IVO(I,J)),J=1,3)
0040   19    CONTINUE
0041          I=1
0042   20    CONTINUE
0043          IF(TBLV(I,2).LT.0.OR.TBLV(I,3).LT.-.05) GO TO 22
       C      BRANCH TO COMPUTE MATRIX FOR INCREMENTAL SICK LEAVE AND/OR VACATION.
0044          TBLV(I,1)=TBLV(I,1)+TBLV(I,2)+TBLV(I,3)
0045          IF(I.GE.7) GO TO 26
0046          I=I+1
0047          GO TO 20
0048   22    CONTINUE
0049          IHOL=TBLV(I,1)
0050          IF(TBLV(I,2).GT.-1.AND.TBLV(I,3).LT.-1) GO TO 94
0051          IF(TBLV(I,2).LT.-1.AND.TBLV(I,3).GT.-1) GO TO 95
0052          DO 24 J=1,3
0053   24    IVO(I,J)=TBLV(I,1)+IVO(I,J)
0054          TBLV(I,1)=-8
0055          I=I+1
0056          GO TO 20
0057   94    TRLV(I,1)=-5
0058          DO 99 J=1,3
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0059        99  IVD(I,J)=IVD(I,J)+IHOL+TBLV(I,2)
0060            I=I+1
0061            GO TO 20
0062        95  TBLV(I,1)=-3
0063            DO 101 J=1,3
0064       101  ISL(I,J)=ISL(I,J)+IHOL+TBLV(I,3)
0065            I=I+1
0066            GO TO 20
0067        26  READ(5,17)IPG,LIM,(FB(I),I=1,7)
0068         C      READ CARD ON FRINGE BENEFIT RATE, IN INTEGER FORM, SO COMPUTE TO GET
0069         C      SALARY/WAGE ADD ON
0068            DO 23 I=1,7
0069        23  FB(I)=FB(I)/100.
0070         C      READ CARD ON SABBATICAL. COMPUTE NUMBER OF DAYS ACCRUED ANNUALLY
0071            READ(5,2) IPG,LIM,NOY,KSAB,ISAB,MSAB
0072            SAB=0.
0073            IF(NOY.EQ.2)GO TO 47
0074            SAB=(MSAB*176.)/ISAB
0073         C  FINISHED WITH TABLE GENERATION NOW RD EMP ID. COMP HOURLY COST EACH
0074        47  CONTINUE
0075            ENTRY FACT2(LRN,NOEMP)
0076            LRID=LRN
0077            WRITE (6,4) LRID
0078            DO 30 N=1,NOEMP
0079            READ(5,6) IPG,LIB,IDE,KL,ISAL,WGS,IDHR,IHRS,NYRS,NOM
0080            EMID(N)=IDE
0081            EMNK(N)=KL
0082            IF(ISAL.LT..01) GO TO 38
0083            DN=0.
0084            IF(KL.NE.KSAB) GO TO 32
0085            DN=SAB
0086        32  DZOF=TBLV(KL,1)
0087            IF(DZOF.LT.0) GO TO 40
0088        33  FR=1.
0089            IF(NOM.LT..01) GO TO 35
0090            FR=NOM/12.
0091        35  FR=FR*IHRS/40.
0092            DN=(2080.-DZOF*8-DN)*FR
0093        34  CNUM=ISAL*(1.+FR(KL))
0094            EMCST(N)=CNUM/DN
0095        36  WRITE(6,5) EMID(N),EMNK(N),EMCST(N)
0096            GO TO 30
0097        38  EMCST(N)=WGS*(1.+FB(KL))
0098            GO TO 36
0099         C  FINISHED EMPLOYEE COST LIST
0099        40  INT=1
0100            IV=1
0101            DZOF=0
```

```
0102              IF(TBLV(KL,1)+5) 27,27,25
0103       27     IF(NYRS.LE.INV(KL,IV)) GO TO 29
0104              IF(IV.GE.3) GO TO 29
0105              IV=IV+1
0106              GO TO 27
0107       29     DZOF=IVD(KL,IV)
0108              IF(TBLV(KL,1)+5) 25,33,25
0109       25     IF(NYRS.LE.IIN(KL,INT)) GO TO 31
0110              IF(INT.GE.3) GO TO 31
0111              INT=INT+1
0112              GO TO 25
0113       31     DZOF=ISL(KL,INT)+DZOF
0114              GO TO 33
0115       30     CONTINUE
0116              IF(IND.GT..5) RETURN
0117              IND=0
0118    C  FINISHED EMPLOYEE COST LIST, NOW TIME COST TABLE
0119              ENTRY FACT3 (LBN,NOEMP)
0120              LBID=LBN
0121       50     READ(5,7)ACT,NACT,IAD,IDM,FTE
          C  READS DEPARTMENT UP TO 8 ALPHA CHARACTERS THEN NUMBER OF LISTED ADTIVITIES
          C  THEN THE NUMBER OF THE ADMINISTRATIVE TASK, THEN THE
          C  LIBRARY ADMINISTRATIVE BUDGET AND TOTAL FTE FOR INCLUSION ON ADM OVERHEAD
                  IF(NACT.GT.50) STOP
          C  ADMINISTRATIVE DEPARTMENT OVERHEAD ADD ON PER MINUTE
0122              IF(FTE.LT..01) ADMCST=0.
0123              IF(FTE.GT..01) ADMCST=((IDM/FTE)/2080.)/60.
          C  PRE ZERO TIME AND COST MATRICES
0124              DO 57 I=1,NACT
0125              PT(I)=0.
0126              PC(I)=0.
0127              VOL(I)=0
0128              DO 53 J=1,8
0129              TIME(I,J)=0
0130       53     COST(I,J)=0.
0131       57     CONTINUE
          C  READ TASK CARDS SUMMING TIME AND COST INTO MATRIX ACCORDING TO TASK
          C  NUMBER AND EMPLOYEE CLASSIFICATION.
0132       51     READ(5,52) IP,LIB,IDE,IACT,ITIME,IVOL
0133       52     FORMAT(I1,5X,I3,A6,3I5)
          C  FINISHED IF TASK NUMBER EQUALS ZERO.
0134              IF(IACT.LT..01) GO TO 100
0135              N=1
0136       54     IF(EMID(N).EQ.IDE) GO TO 56
          C  STOP IF UNABLE TO MATCH EMPLOYEE IDENTIFICATION.
0137              IF(N.GT.NOEMP) STOP 55
0138              N=N+1
0139              GO TO 54
```

```
0140          56 KL=EMNK(N)
0141             COSTI=ITIME*EMCST(N)/60.
0142             TIME(IACT,KL)=TIME(IACT,KL)+ITIME
0143             COST(IACT,KL)=COST(IACT,KL)+COSTI
0144             N=IACT
0145             VOL(N)=VOL(N)+IVOL
0146             IF(IVOL.NE.0) GO TO 51
0147             PT(N)=PT(N)+ITIME
0148             PC(N)=PC(N)+COSTI
0149             GO TO 51
0150       C INDIVIDUAL CARDS PROCESSED NOW SUMMARIZE AND WRITE
0150       100 CONTINUE
           C TIME PROFILE FORM I
0151             DO 61 J=1,8
0152          61 KLTM(J)=0
0153             KLTT=0
0154             DO 60 I=1,NACT
0155             TTME(I)=0
0156             DO 62 J=1,8
0157             TTME(I)=TTME(I)+TIME(I,J)
0158          62 KLTM(J)=KLTM(J)+TIMF(I,J)
0159             KLTT=KLTT+TTME(I)
0160          60 CONTINUE
0161             WRITE(6,8) LBID, ACT
0162             WRITE(6,201)
0163             DO 37 I=1,NACT
0164             IF(I-25)67,68,67
0165          68 WRITE(6,16)
0166             WRITE(6,8)LBID,ACT
0167             WRITE(6,201)
0168          67 CONTINUE
0169             IF(TTME(I).GT..01) GO TO 93
0170             WRITE(6,69) I
0171             GO TO 37
0172          93 CONTINUE
0173             DO 28 J=1,8
0174             PTTM(J)=0.
0175             IF(KLTM(J).LT..01) GO TO 28
0176             PTTM(J)=TIME(I,J)*100./KLTM(J)
0177          28 CONTINUE
0178             WRITE(6,9)I,(TIME(I,J),J=1,8),TTME(I),(PTTM(J),J=1,8)
0179          37 CONTINUE
0180             DO 39 J=1,8
0181             PTTM(J)=0
0182             IF(KLTM(J).LT..01) GO TO 39
0183             PTTM(J)=KLTM(J)*100./KLTM(J)
0184          39 CONTINUE
0185             WRITE(6,14)(KLTM(J),J=1,8),KLTT,(PTTM(J),J=1,8)
```

```
0186              WRITE (6,16)
       C          SUMMARY FORM 2
0187              WRITE(6,43) LBID,ACT
0188              WRITE(6,201)
0189              DO 41 I=1,NACT
0190              PTTM(J)=0
0191       42     PTTM(J)=0
0192              IF(I-25) 63,45,63
0193       45     CONTINUE
0194              WRITE(6,16)
0195              WRITE(6,43) LBID,ACT
0196              WRITE(6,201)
0197       63     CONTINUE
0198              INC=0
0199              UNTM(I)=0.
0200              IF(TTME(I).GT..01) GO TO 64
0201              WRITE(6,69) I
0202              GO TO 41
0203       64     CONTINUE
0204              RTM=100./TTME(I)
0205              DO 58 J=1,8
0206       58     PTTM(J)=TIME(I,J)*RTM
0207              IF(VOL(I).LT..01) GO TO 65
0208              IF(PT(I).NE.0) INC =1
0209              TTT=TTME(I)-PT(I)
0210              UNTM(I)=TTT/VOL(I)
0211              WRITE(6,44) I,TTME(I),(PTTM(J),J=1,8),VOL(I),UNTM(I),INC
0212       44     FORMAT(1H0,I3,3X,I10,3X,8(F7,1,*%*),I10,F10.2,I5)
0213              GO TO 41
0214       65     CONTINUE
0215              WRITE(6,101),TTME(I),(PTTM(J),J=1,8)
0216       10     FORMAT(1H0,I3,3X,I10,3X,8(F7,1,*%*),'       -NE-')
0217       41     CONTINUE
0218              CLMT=KLTT
0219              DO 66 J=1,8
0220              PTTM(J)=(KLTM(J)/CLMT)*100.
0221       66     CONTINUE
0222              WRITE(6,46)KLTT,(PTTM(J),J=1,8)
0223       46     FORMAT(6H0TOTAL ,3X,I8,3X,8(F7,1,*%*))
0224              WRITE(6,16)
       C          SUMMARY FORM 3
0225              WRITE (6,11) LBID, ACT
0226              WRITE(6,201)
0227              ADC=0.
0228              TTSK=0.
0229              DO 81 J=1,8
0230       81     CLCS(J)=0.
0231              CLCT=0.
```

143.

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0232           DO 80 I=1,NACT
0233           UADC=0.
0234           INC=0
0235           ACTAC(I)=0.
0236           TSKCS=0.
0237           UNCST=0.
0238           TCOST(I)=0
0239           UNTOT=0.
0240           IF(I-25)87,88,87
0241   88      WRITE(6,16)
0242           WRITE(6,91)
0243           WRITE(6,11) LBID,ACT
0244           WRITE(6,201 )
0245   87      CONTINUE
0246           DO 82 J=1,8
0247           TCOST(I)=TCOST(I)+COST(I,J)
0248   82      CLCS(J)=CLCS(J)+COST(I,J)
0249           IF(TCOST(I).LT..01) GO TO 84
0250           CLCT=CLCT+TCOST(I)
0251           IF(VOL(I).LT..01) GO TO 85
0252           IF(PC(I).NE.0.)INC=1
0253           TCC=TCOST(I)-PC(I)
0254           UNCST =TCC/VOL(I)
0255           UADC=UNTM(I)*ADMCST
0256           UNTOT=UNCST+UADC
0257   84      ACTAC(I)=TME(I)*ADMCST
0258           ADC=ADC+ACTAC(I)
0259           TSKCS=ACTAC(I)+TCOST(I)
0260           TTSK=TTSK+TSKCS
0261           IF(TSKCS.GT..01) GO TO 83
0262           WRITE(6,69) I
0263           GO TO 80
0264   83      WRITE(6,12) I,(COST(I,J),J=1,8),TCOST(I),ACTAC(I),VOL(I),
0265          1UNCST,UADC,UNTOT,INC
0266   12      FORMAT(1H0,I3,2X,8F8.2,2F10.2,I7,3F9.2,I5)
0267           GO TO 80
0268   85      CONTINUE
0269   86      ACTAC(I)=TTME(I)*ADMCST
0270           ADC=ADC+ACTAC (I)
0271           TSKCS=ACTAC(I)+TCOST(I)
0272           TTSK=TTSK+TSKCS
0273           WRITE(6,13) I,(COST(I,J),J=1,8),TCOST(I),ACTAC(I)
0274   13      FORMAT(1H0,I3,2X,8F8.2,2F10.2,'    -NE-')
0275   80      CONTINUE
0276           WRITE (6,15) (CLCS(J),J=1,8),CLCT,ADC
0277   15      FORMAT(6H0TOTAL,4F8.2,2F10.2)
0278           WRITE(6,16)
               WRITE(6,91)
```

```
      C              SUMMARY FORM 4
0279                 WRITE(6,48) LRID,ACT
0280                 WRITE(6,201)
0281                 ADTSK=0
0282                 IF(IAD.LT..01) GO TO 90
0283                 DN=KLIT-TME(IAD)
0284                 IF(DN.LT..01) STOP
0285                 ADTSK=(TCOST(IAD)+ACTAC(IAD))/DN
0286    90           CONTINUE
0287                 DO 49 I=1,NACT
0288                 DO 59 J=1,8
0289    59           PTTM(J)=0
0290                 ADCST=0
0291                 TOTAL=0
0292                 ADPRC=0
0293                 IF(I-25) 79,70,79
0294    70           CONTINUE
0295                 WRITE(6,16)
0296                 WRITE(6,91)
0297                 WRITE(6,48) LRID,ACT
0298                 WRITE(6,201)
0299    79           CONTINUE
0300                 IF(I.NE.IAD) GO TO 71
0301                 WRITE(6,72) I,TCOST(I),ACTAC(I)
0302    72           FORMAT(1H0,I3,'##',2F10.2,' ## ADMINISTRATIVE TASKS, DISTRIBUTED I
             IN **ADMIN TASK COST** OVER ALL OTHER TASKS')
0303                 GO TO 49
0304    71           CONTINUE
0305                 IF(TTME(I).GT..01) GO TO 73
0306    78           CONTINUE
0307                 WRITE(6,74) I
0308    74           FORMAT(1H0,I3,10X,'-NE-')
0309                 GO TO 49
0310    73           CONTINUE
0311                 ADCST=TTME(I)*ADTSK
0312                 TOTAL=TCOST(I)+ACTAC(I)+ADCST
0313                 IF(TOTAL.LT..01) GO TO 78
0314                 ADPRC=(ACTAC(I)+ADCST)*100./TOTAL
0315                 DO 76 J=1,8
0316    76           PTTM(J)=COST(I,J)*100./TOTAL
0317    75           CONTINUE
0318                 WRITE(6,77) I,TCOST(I),ACTAC(I),ADCST,TOTAL,ADPRC,(PTTM(J),J=1,8)
0319    77           FORMAT(1H0,I3,2X,4F10.2,9(F7.1,'%'))
0320    49           CONTINUE
0321                 IF(IAD.GT..01) GO TO 92
0322                 TOTAL=CLCT
0323                 ADCST=0
0324                 DO 97 J=1,8
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0325        97    PTTM(J)=CLCS(J)*100./TOTAL
0326              GO TO 96
0327        92    CONTINUE
0328              TOTAL=CLCT+ADC
0329              CLCT=CLCT-TCOST(IAD)
0330              ADC=ADC-ACTAC(IAD)
0331              ADCST=TCOST(IAD)+ ACTAC(IAD)
0332              DO 89 J=1,8
0333              PTTM(J)=(CLCS(J)- COST(IAD,J))*100./TOTAL
0334        89    CONTINUE
0335        96    ADPRC=(ADCST+ADC)*100./TOTAL
0336              WRITE(6,98) CLCT,ADC,ADCST,TOTAL,ADPRC,(PTTM(J),J=1,8)
0337        98    FORMAT(6HOTOTAL ,4F10.2,9(F7.1,'%'))
0338              WRITE(6,16)
0339              WRITE(6,91)
0340              RETURN
0341              END
```

APPENDIX I

THE CON SUBROUTINE PROGRAM LISTING AND SAMPLE OUTPUT

```fortran
0001              SUBROUTINE CON(LIB,NOEMP)
           C      THE PURPOSE OF THE CON SUBROUTINE IS TO SUMMARIZE CASE STUDY STAFF
           C      LISTS FOR ACQUISITIONS, CATALOGING, SERIALS, AND INTERLIBRARY LOAN
           C      DEPARTMENTS (PAGE 7 THROUGH 10) FOR INCLUSION WITH THE SURVEY DATA.
0002              REAL*8 EID
0003              DIMENSION FTE(4,8),SAL(4,8)
0004              INTEGER F
0005            1 FORMAT(I1,I2,3X,I3,A6,I5,F10.0,F5.0,1X,F2.0)
0006            7 FORMAT(9H0LINE NO.,I5,4(F10.2,10X),T100,'CARD NO.',I5)
0007            9 FORMAT(1H1,T20,'LIBRARY NUMBER',I5,/,1H0,T20,'DEPARTMENT FTE TABLE
                 1',/,1H0,T16,'ACQUISITIONS',T37,'CATALOGING',T59,'SERIAL
                 2S',T74,'INTERLIBRARY LOAN',/,1H ,T19,'(31-40)',T39,'(41-50)',T59,
                 3'(51-60)',T79,'(61-70)')
0008            2 DO 2 I=1,4
0009              DO 2 J=1,8
0010              FTE(I,J)=0
0011              SAL(I,J)=0
           C      READ CAPDS AND ACCUMULATE FTE AND SALARY ACCORDING TO DEPARTMENT
           C      (PAGE NUMBER) AND EMPLOYEE CLASSIFICATION ( 1 THROUGH 8).
0012              DO 3 J=1,NOEMP
0013            5 READ(5,1) F,IP,LIB,EID,IT,AS,WG,HW
0014              IF(IAS.LT..01) GO TO 4
0015              I=IP-6
0016              FW=40.
0017              FR=HW/FW
0018              FTE(I,IT)=FTE(I,IT)+ FR
0019              IF(IAS.LT..01) GO TO 4
0020              SAL(I,IT)=SAL(I,IT)+FR*AS
0021              GO TO 3
0022            4 SAL(I,IT)=SAL(I,IT)+WG* 2089.*FR
0023            3 CONTINUE
0024              WRITE(6,9) LIB
0025              KNO=J+12
0026              DO 6 J=1,8
0027              WRITE(6,7) J,(FTE(I,J),I=1,4),KNO
0028            6 CONTINUE
0029              WRITE(6,10)
0030           10 FORMAT(1H0,T20,'DEPARTMENT SALARY TABLE')
0031              DO 8 J=1,6
0032              KLN=J+8
0033              KNO=J+20
0034              WRITE(6,7) KLN,(SAL(I,J),I=1,4),KNO
0035            8 CONTINUE
0036              RETURN
0037              END
```

LIBRARY NUMBER 301

DEPARTMENT FTE TABLE

LINE NO	ACQUISITIONS (31-40)	CATALOGING (41-50)	SERIALS (51-60)	INTERLIBRARY LOAN (61-70)	CARD NO
1	0.0	0.88	0.0	1.00	13
2	0.0	0.0	0.0	0.0	14
3	0.38	0.0	0.0	1.00	15
4	1.15	2.97	0.35	1.42	16
5	0.0	0.38	0.0	0.25	17
6	0.0	0.45	0.0	0.0	18
7	0.0	0.0	0.0	0.0	19
8	0.0	0.0	0.0	0.0	20

DEPARTMENT SALARY TABLE

LINE NO	ACQUISITIONS (31-40)	CATALOGING (41-50)	SERIALS (51-60)	INTERLIBRARY LOAN (61-70)	CARD NO
9	0.0	10783.50	0.0	12900.00	21
10	0.0	0.0	0.0	0.0	22
11	3991.50	0.0	0.0	7464.00	23
12	8364.00	17650.59	2006.00	7311.71	24
13	0.0	1911.00	0.0	1274.00	25
14	0.0	1029.60	0.0	0.0	26